The Northeast Frontier of Bell Beakers

Proceedings of the symposium held at the
Adam Mickiewicz University, Poznań (Poland),
May 26-29 2002

Edited by

Janusz Czebreszuk
Marzena Szmyt

BAR International Series 1155
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Published in 2016 by
BAR Publishing, Oxford

BAR International Series 1155

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ISBN 9781841715254 paperback
ISBN 9781407325590 e-format
DOI https://doi.org/10.30861/9781841715254
A catalogue record for this book is available from the British Library

BAR Publishing is the trading name of British Archaeological Reports (Oxford) Ltd. British Archaeological Reports was first incorporated in 1974 to publish the BAR Series, International and British. In 1992 Hadrian Books Ltd became part of the BAR group. This volume was originally published by Archaeopress in conjunction with British Archaeological Reports (Oxford) Ltd / Hadrian Books Ltd, the Series principal publisher, in 2003. This present volume is published by BAR Publishing, 2016.

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PREFACE

In the wealth of literature concerning Bell Beakers, the present volume is the first broad treatment of issues relating to their northeast frontier. The book has grown from papers read at the symposium *Northeast Frontier of Bell Beakers* held in the Institute of Prehistory, Adam Mickiewicz University, in Poznań on 26-29 May 2002. The symposium was co-organized by the AMU Foundation, AMU Institute of Eastern Studies, Archaeological Museum in Poznań and the Poznań Prehistoric Society. The cost of layout was covered by the Polish Committee for Scientific Research (grant no. 1H01H01917). The editors sincerely thank Dr David Davison in Oxford for publishing this volume in the *BAR* series.

We wish to dedicate it to

Humphrey Case in Oxford

and

Professor Christian Strahm in Freiburg,

two great authorities on Bell Beakers and teachers of many generations of archaeologists, celebrating their individual anniversaries in the year of our symposium.

Janusz Czebreszuk, Marzena Szmyt
Poznań, 8 May 2003

CONTENTS

PREFACE i

CONTENTS iii

Janusz Czebreszuk, Marzena Szmyt
INTRODUCTION 1

Johannes Müller
ECONOMIC CONTINUITY AND POLITICAL DISCONTINUITY IN CENTRAL EUROPE DURING THE THIRD MILLENNIUM BC 3

Marc Vander Linden
COMPETING COSMOS. ON THE RELATIONSHIPS BETWEEN CORDED WARE AND BELL BEAKER MORTUARY PRACTICES 11

Janusz Czebreszuk
BELL BEAKERS IN THE SEQUENCE OF THE CULTURAL CHANGES IN SOUTH-WESTERN BALTIC AREA 21

David Liversage
BELL BEAKER POTTERY IN DENMARK – ITS TYPOLOGY AND INTERNAL CHRONOLOGY 39

Kathrin Mertens
EINFLÜSSE DER GLOCKENBECHERKULTUR IN NORDDEUTSCHLAND 51

Kathrin Mertens
EIN SIEDLUNGSPLATZ DER GLOCKENBECHERKULTUR IN HAMBURG-BOBERG? 73

Knut Rassmann
GLOCKENBECHEREINFLÜSSE UND REGIONALE GLIEDERUNG NORDOSTDEUTSCHLANDS IM SPÄTNEOLITHIKUM 85

Andreas Hille
DIE GLOCKENBECHERKULTUR IN MITTELDEUTSCHLAND. EIN ZWISCHENBERICHT 101

Janusz Czebreszuk, Mikola Kryvalcevicz
THE NORTH-EASTERN BORDER OF INFLUENCE OF BELL BEAKERS IDEA 107

Jarosław Sobieraj
RECEPTION OF SOME BELL BEAKERS' CULTURAL PATTERNS BY CORDED WARE SOCIETIES IN SOUTHEASTERN BALTIC AREA 117

Ilze Loze
THE LUBĀNS, NORTH BELARUSIAN AND ŠAGARA CULTURES AS AN EASTERN PHENOMENON OF AN ENEOLITHIC CULTURAL UNIT 123

Przemysław Makarowicz
NORTHERN AND SOUTHERN BELL BEAKERS IN POLAND 137

Janusz Budziszewski, Elżbieta Haduch, Piotr Włodarczak
BELL BEAKER CULTURE IN SOUTH-EASTERN POLAND 155

Jan Turek, Petr Dvořak, Jaroslav Peška
ARCHAEOLOGY OF BEAKER SETTLEMENTS IN BOHEMIA AND MORAVIA. AN OUTLINE OF THE CURRENT STATE OF KNOWLEDGE 183

Magdalena Krutova
BELL BEAKER AND ÚNĚTICE BURIAL RITES. CONTINUITY AND CHANGE IN FUNERARY PRACTICES AT THE BEGINNING OF BRONZE AGE 209

Jerzy Kopacz, Antonín Přichystal, Lubomír Šebela, Petr Škrdla
CONTRIBUTION TO THE QUESTION OF CHIPPED STONE INDUSTRY OF THE MORAVIAN BELL BEAKER CULTURE 215

Lubomír Šebela, Petr Škrdla
A CEMETERY OF THE BELL BEAKER CULTURE IN MAREFY AND ITS CONTRIBUTION TO THE STUDIES ON THE CHIPPED STONE INDUSTRY OF THE MORAVIAN LATE ENEOLITHIC PERIOD 231

Daniela Kern
GLOCKENBECHER IN OSTÖSTERREICH – ANDERE FRAGEN ANDERE ANTWORTEN? 249

Jozef Bátora, Klára Marková, Jozef Vladár
DIE GLOCKENBECHERKULTUR IM KONTEXT DER KULTURHISTORISCHEN ENTWICKLUNG IN DER SÜDWESTSLOWAKEI 255

Anna Endrődi
THE LATE PHASE OF THE BELL BEAKER CSEPEL GROUP IN HUNGARY 265

Ferenc Gyulai
ARCHAEOBOTANICAL REMAINS AND ENVIRONMENT OF BELL-BEAKER CSEPEL-GROUP 277

Janusz Czebreszuk, Marzena Szmyt
THE NORTHEAST FRONTIER OF BELL BEAKERS – FIRST STEP TO OUTLINE 283

INTRODUCTION

Janusz Czebreszuk, Marzena Szmyt (Poznań, Poland)

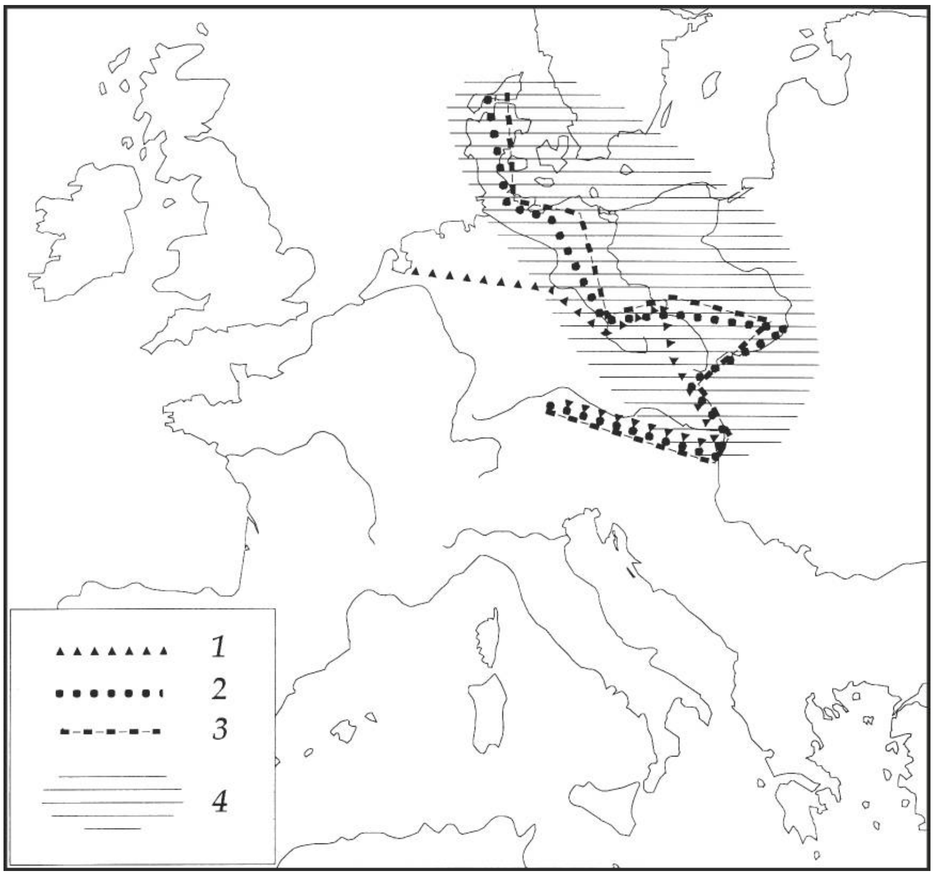

Fig. 1. Northeast frontier of Bell Beakers according to: (1) P. Bosch-Gimpera 1926, (2) R.J. Harrison 1980, (3) Ch. Strahm (Hrsg.) 1995. (4) Region under investigation in the present volume.

In the history of the studies of Bell Beakers (BB) the issues relating to their northeastern frontier are among those which have rarely attracted the attention of scholars despite the fact that they contain many open questions. A fundamental question concerns the spatial range of this zone determined on the basis of the catalogues of archaeological sites. So far, this issue alone has been differently presented in the literature of the subject. Let us show three examples. Pedro Bosch-Gimpera (Bosch-Gimpera 1926, Taf. 145) restricted the northeastern range of BB to Holland, the Saale region, Silesia and Moravia (Fig. 1:1). Richard Harrison (Harrison 1980) drew the northeastern range of BB along the line stretching from Jutland via northwestern Germany the Saale region, Little Poland, Moravia to the vicinity of Budapest (Fig. 1:2). In turn, in a work edited by Christian Strahm (Strahm (Hrsg.) 1995), the said line joins the following regions: Jutland, the lower Elbe, Mecklenburg, Silesia, Little Poland, Moravia and the vicinity of Budapest (Fig. 1:3). It follows that there appears a clear tendency to expand the Beaker oecumene step by step in the direction of interest to us here.

How does the situation look now? Can one speak of the stabilization of the northeastern range of BB or is the tendency to expand it still visible? To answer satisfactorily these questions, we have decided to draw liberally the spatial limits of the region under investigation. They include Jutland, the drainages of the main rivers of Central Europe, namely the Elbe, Oder, Vistula, and the territories of Slovakia, Hungary and Austria (Fig. 1:4). We devoted much attention, too, to the northeastern foreground of BB, i.e. the territories of contemporary Belarus and the Baltic States.

The delineation of spatial range of any cultural phenomenon must be treated as the first stage of research that seeks answers to a longer list of questions. It was our aim to include in the present volume such a batch of information that—together with older works—would make it possible to outline, with a greater precision than it was hitherto possible, the origins, directions of development and role of BB in the cultural transformations taking place along their northeastern frontier drawn broadly. From the papers included in this volume, a highly diversified picture emerges both in terms of forms in which BB appeared in different regions and mechanisms of their development. We are convinced that future research will leave us with an even more complex picture. This challenge, constantly taken up anew, is the driving force behind the development of archaeology, which is best reflected in none else than the history of research into BB.

References

BOSCH-GIMPERA P. 1926. Glockenbecherkultur. In: M. EBERT (Hrsg.), *Reallexikon der Vorgeschichte*, B. 4, H. 2, 345-362. Berlin.

HARRISON R.J. 1980. *The Beaker Folk. Copper Age archaeology in Western Europe*. London.

STRAHM Ch.(Hrsg.) 1995. *Das Glockenbecher-Phänomen. Ein Seminar*. Freiburger Archäologische Studien 2. Freiburg.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

ECONOMIC CONTINUITY AND POLITICAL DISCONTINUITY IN CENTRAL EUROPE DURING THE THIRD MILLENNIUM BC

Johannes Müller (Bamberg, Germany)

Marked by gaps and changes, the archaeological material from the third millennium BC in Central Europe is difficult to interpret. The beginning of the Corded Ware, for example, is still viewed as an abrupt break after the Late Neolithic,[1] as a division within Late Neolithic societies or as demographic continuity. Likewise, changes within the "Beaker cultures", above all the transition from the use of Corded Ware vessels to Bell Beakers, allow numerous models of interpretation. The same applies to the transition to the Early Bronze Age, during which considerable technological changes can be discerned in contrast to previous periods, on one hand, yet, on the other, lines of tradition to the Bell Beaker groups or also to the Corded Ware were maintained (cp. MÜLLER 2002).

In order to conduct this treatise on unexplained aspects of an entire millennium of developmental processes in prehistory in a somewhat more structured manner, use should be made of the designations continuity and discontinuity. There are various methodical approaches to the concept of continuity and/or discontinuity in studying the transformation of pre- or proto-historical forms of society (KNOPF 2002). They all share the same premise that different spheres of society can develop in different ways. An example is the possibility of political-administrative discontinuity within demographic and economic continuity. Options are also conceivable that would disclose a discontinuity in the ritual sphere, whereas continuity in the worldly sphere prevails. Analogous to various analytical schemes, for instance, regarding the transition between the Roman and medieval periods (KUNOW 1994), the following attempts to view various aspects of Neolithic society.

Possibilities for any kind of reconstruction are severely limited because of the familiar situation in source material for the central European End-Neolithic (i.e. predominantly grave finds, but fewer from settlements). Primarily pollen analyses are available for reconstructing subsistence strategies, whereas only few archaeozoological investigations are at hand. Reconstruction of any ideological aspects must necessarily base on the evaluation of funerary customs and only seldom settlement patterns.

The following aims at presenting a summary of information on subsistence strategies practised during the End Neolithic in Central Europe, as well as an example of the reconstruction of a regional settlement development, which in turn should serve as the basis for determining the socio-economic development of the respective societies. Question on continuity in settlement patterns and aspects of funerary practises, by contrast, will be explored with regard to forms of political organisation, i.e. ideological aspects.

Subsistence Strategies

Data provided by pollen analyses represents the primary source of information on End Neolithic subsistence economies; otherwise there are only few source categories that offer information (cp. the summarisation by LÜNING 2000, 54pp.). Among these sources, as regards cereal processing, archaeological research on settlements carried out at Lake Zürich should be cited, which resulted in evidence of a traditional agrarian culture with emmer opposite barley as the predominant grain (SCHIBLER/HÜSTER-PLOGMANN/JACOMET/BROMBACHER/GROSS-KLEE/RAST-EICHER 1997). Otherwise, due to the lack of further sources, only the works of Schultze-Motel can be pointed out, in which the probable dominance of barley over emmer before

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[1] The designation for the various periods is according to LÜNING 1996.

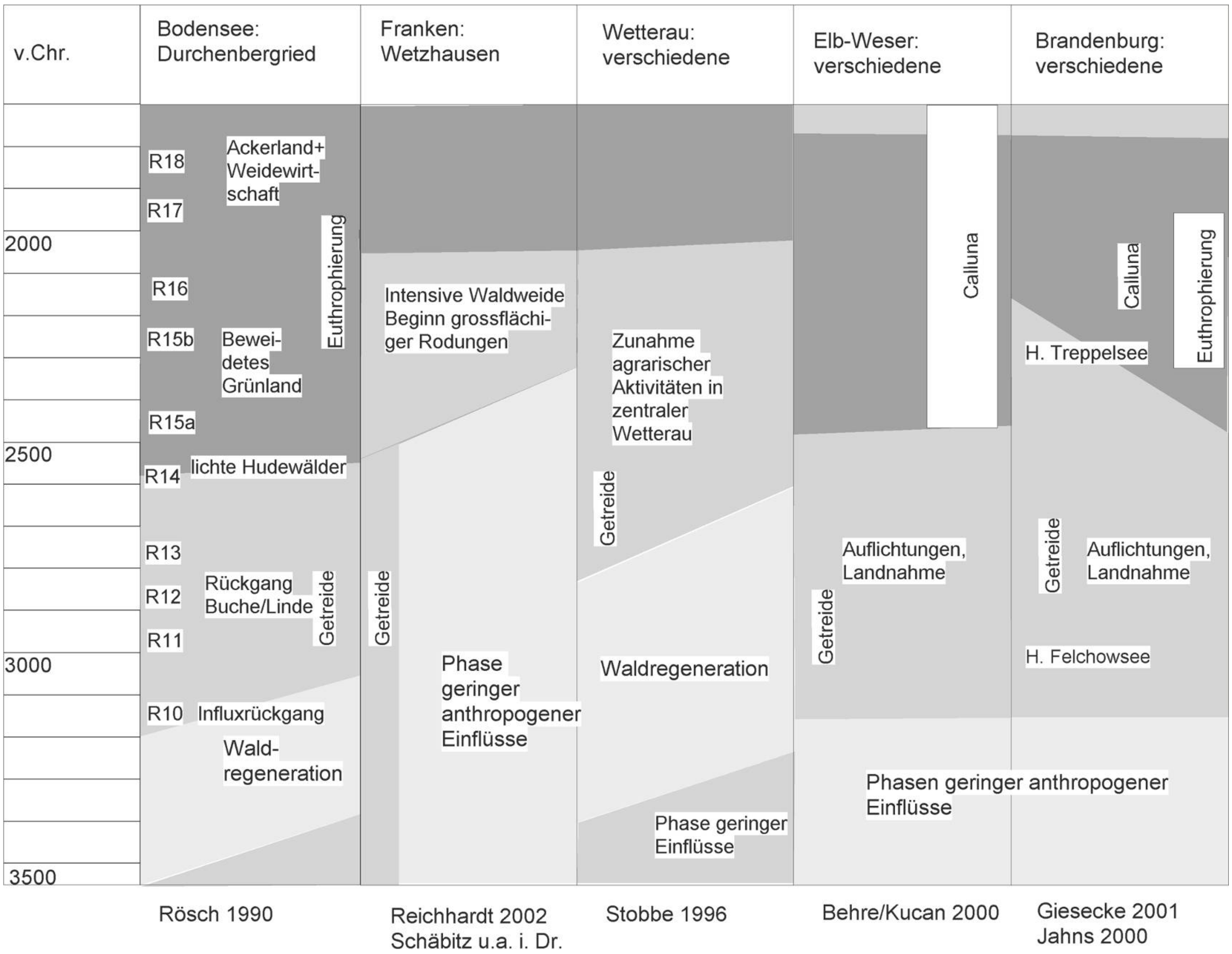

Fig. 1. Basic tendencies indicated in the comparison of pollen analyses from different regions of Central Europe. Legend: light grey small human impact; grey continuity of agrarian activities; dark grey intense agriculture and pasture; R phase of clearance.

einkorn during the End Neolithic in the Middle Elbe-Saale area is asserted (Schultze-Motel 1969; Schultze-Motel/Wetzel 1979; Schultze-Motel/Gall 1994). If this meagre data is reliable, then by and large, cereal processing during the End Neolithic did not experience any grave qualitative changes, as opposed to the preceding or following periods.

The few archaeozoological investigations attest lines of continuity between the preceding and subsequent agrarian economies (cp. Bottendorf, Magdeburg-Neustadt, inventory of pits from the Lausitz coal area, Ergersheim and Zürich for Corded Ware; Nähermemmingen, Holubice and Ergersheim for Bell-Beakers; see in summary Lüning 2000, 139pp.). Approximately 70–90% of the skeletal remains constitutes domestic animals, whereby cattle, pig and sheep/goat predominate.

Where as before only a very small number of settlements with direct indications of subsistence strategies, for instance, are accounted for, in recent years the number of absolute chronologically dated pollen analyses for the third millennium BC has increased (cp. Haas/Giesecke/Karg 2002).

Covering several areas of Central Europe, the analyses provide a representative cross-section of dates for northern, western and southern Germany. Hence, it should be possible to approach the analyses with basic inquiries regarding continuity and discontinuity in the agricultural/environmental development under human influence or the reconstruction of End Neolithic subsistence practises. Thereby, tendencies in one direction or the other should be discernible (Fig. 1).

For example, in the pollen profile from Swienskuhle in the settlement area of Flögeln/Niedersachsen a typical land acquisition in Iversen's sense can be identified, which takes places after 3300/3100 BC, after a phase of minor human activity (cp. Behre/Kucan 1994; Behre 2000). The increase in wild grasses as pasture indicators and a decrease in tree pollen-particles suggest increased clearance and human exploitation of the landscape during the third millennium BC, which through the appearance of heathlands (attested by a rise in the amount of *Calluna*) after c. 2500 BC attained a new quality. A decrease in human activities can first be discerned in the beginnings of the Early Bronze Age.

A comparable picture is revealed by pollen analyses from the area of eastern Germany. There following phases of lesser human influence, measures for acquiring land can be recognised at Grosser Krebssee /Neuenhagen Island, Oder river (Jahns 2000), at Felchowsee (Jahns 2000) and at Grosser Treppelsee (Giesecke 2001), which likewise begin after c. 3100 BC. Whereas pastoral and agricultural activities at Felchowsee reached a peak around 2900 BC, as determined by pollen analyses, indicators of forest clearance and land acquisition in other pollen analyses from Brandenburg increased consistently. In Grosser Treppelsee peak can be presumed around 2300 BC. Furthermore, an increasing contamination of lake water, probably by humans, is indicated by rising amounts of *Pediastrum*. The exhaustion of pastures in the second half of the third millennium BC is likewise attested by increased amounts of Calluna and the appearance of heathland. Similarly, pollen levels from the Elbe-Weser triangle point towards a diminishing human influence in the course of the initial Early Bronze Age (Jahns 2000; Giesecke 2001).

Other pollen analyses from the area of Lake Constance, for example, suggest comparable developments within a similar time-horizon. Accordingly, in the pollen profile from Durchenbergried presented by Rösch, following a phase of forest regeneration around 3100 BC with a recession in influx as well as a decrease in beech and linden pollen after clearance phase 10, a similarly strong increase in pastoral and agrarian activities can be noted (Rösch 1990). This picture prevails throughout clearance phases R11-R13 during the entire first half of the third millennium BC, until around 2600 BC when the first clear woodland pastures are attested. In the second half of the third millennium BC pastureland can be discerned in the Durchenbergried. Likewise, after 2300 BC water contamination in the vicinity, caused by human waste materials, can be reckoned with as well. Yet, opposite the aforementioned pollen analyses from northern Germany, results from the Durchenbergried show that a distinct agrarian and pastoral economy also existed in the Early Bronze Age.

Further pollen analyses from other regions can be cited here that reveal intensive Late Neolithic settlement activities before the beginning of the End Neolithic (cp. Haas et al. 2002). Among these is, for example, the Luttersee by Eichsfeld (Niedersachsen), where fluctuations in settlement- and clearance-phases appear to indicate that there were short interruptions that extended from the Late into the End Neolithic (Beug 1992). All analyses basically point towards a continuity in settlement and subsistence economy/strategies, with no distinguishable differences between the Late and End Neolithic periods.

By contrast, in other regions the Late Neolithic is distinguished by phases of lesser human influence and scanty archaeological evidence. Accordingly, various pollen analyses from the Wetterau, as presented by Stobbe, show that following a phase of minimal human influence during the 35th-34th centuries BC a phase of forest regeneration began, which lasted into the 28th or even the 26th century BC (Stobbe 1996, 173pp.). An increase in agricultural activities can be first discerned in the central Wetterau towards the middle of the third millennium BC, which then led to an intensive cultivation and pastoral economy after the 20th century BC.

Another pollen analysis from Wetzhausen in Lower Franconia produced results showing that after phases of minimal human influence upon pollen deposits, more intensive woodland pasturing and the beginning of large-scale deforestation occurred in the second half of the third millennium BC, which then intensified during the course of the Early Bronze Age (Reichardt in preparation; Schäbitz in print). Pollen analyses from the central Wetterau and Franconia represent regions that evidently were sparsely populated in the Late Neolithic.

The observations described above are presented in a diachronic comparison in Fig. 1. From this synchronistic illustration the following deductions can be made.

1. Landscape formation and subsistence strategies show continuities between the End Neolithic Corded Ware and the Late Neolithic predecessors (for example, Horgen or the later Funnel Beaker groups), represented by intensive pastoral economies and continuous land acquisition. Any breaks in continuity should be placed in the middle part of the Late Neolithic.

2. Discontinuities can be recognised in depopulated or only sparsely inhabited areas (e.g. the Wetterau or Franconia): there following phases of forest regeneration an increase in agricultural and stock-breeding activities can be noted only after the middle of the third millennium BC.

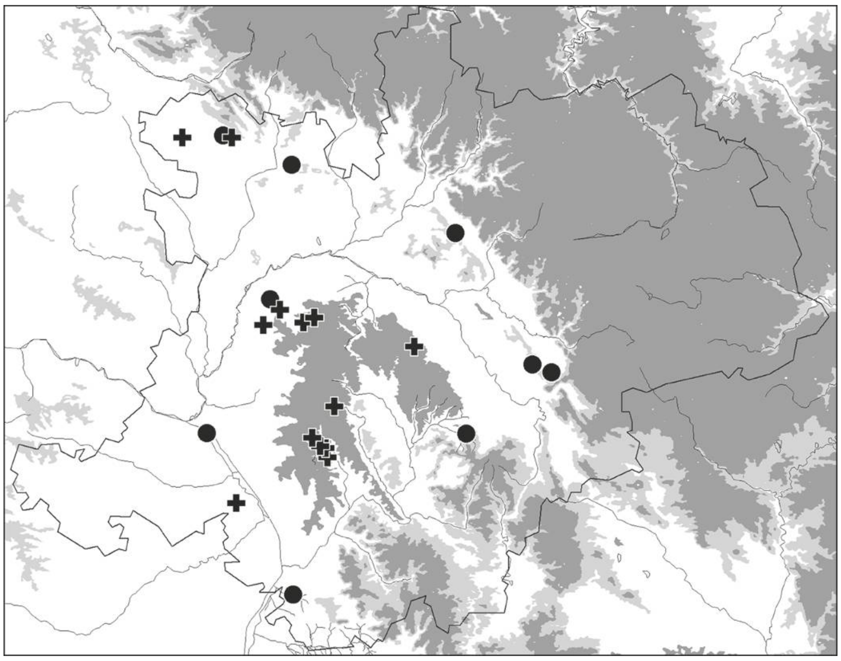

Fig. 2. Distribution of Corded Ware axe types in Upper Franconia (after Seregély 2002, 26 Fig. 4; Seregély in prepration). This presence in the Main and Regnitz river valley plains is followed by an expansion of activity areas that is represented by later types of axes. Legend: circles – earlier axe types (A-axes, faceted axes with angular splayed blade); crosses – middle and late axe types (faceted axes with a curved or narrow blade).

3. Qualitative changes in agrarian economy can be discerned at the latest around 2500 BC through the woodland pastures and intensive forest clearance in all regions of Central Europe, as attested by palynological analyses. Initial environmental contamination (the emergence of heathlands and water contamination) account for other qualities of economical exploitation and with that the relationship of humans with their environment.

4. After 2300 BC differing reactions to economic demands in these regions become apparent. Aside from areas where subsistence activities are intensified (e.g. the hinterland of Lake Constance), areas can be observed in which human influence diminishes (e.g. Brandenburg).

Essentially, despite the above-mentioned supra-regional tendencies, local and regional differences can be observed, even in areas in which comparable developments took place.

Reconstruction of land acquisition during the End Neolithic, Upper Franconia as example

The course of settlements outside of wetland areas in the northern Alpine region or the northern Central European coastal areas can be ascertained only to a limited extent during this period. There are no corresponding parameters due to the lack of specific evidence of settlement. The situation is somewhat different in Upper Franconia. In his recently submitted master's thesis T. Seregély could demonstrate – on one hand – numerous sites from the End Neolithic that exhibit the character of a settlement, while – on the other – occasional finds as well as grave finds, viewed from a fine chronological standpoint, provide a conclusive picture of settlement development (Seregély 2002; Seregély in preparation). Fig. 2, for example, displays a compilation of axe-finds from Upper Franconia from that period. Therewith Seregély demonstrates that sharply faceted axes with angular splayed blade are confined to the lower valleys of the Main and Regnitz rivers, whereas less faceted axes with a narrow straight blade are found in higher areas, for example in the Franconian Alb, as well. Basing on absolute dates from the Tauber valley (Dresely/Müller 2001, 289pp.) the former axes must be assigned to an earlier phase of the Corded Ware, the latter to a later

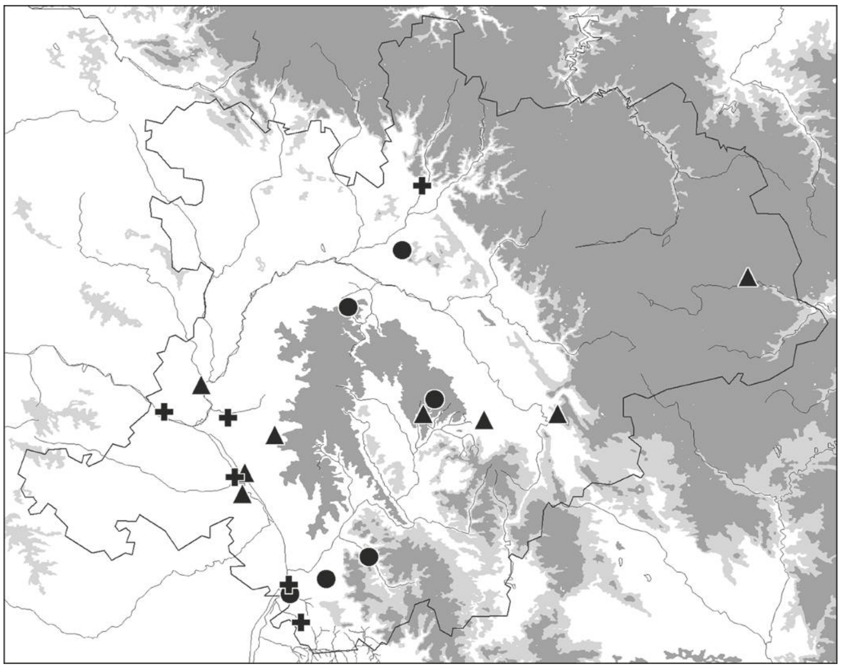

Fig. 3. Distribution of bell beakers and Early Bronze Age finds in Upper Franconia (after Seregély 2002, 35 Abb. 21; Seregély in preparation). Legend: crosses – bell beakers of the early and middle phase (cord impressions and comb-stamped decoration); circles – bell beakers of the later phase (e.g. incised decoration); triangles – sites of the initial Early Bronze Age.

time. Finds of the Bell Beaker culture that are ascribed to an earlier phase (with cord impressions and comb-stamped decoration) are also confined to the aforementioned valley areas, while Bell Beaker finds of later date (with incised decoration, wrist guards type F and a miniature dagger type Oggau) are found similarly in higher reaches of the Franconian Alb. This spatial expansion of archaeological material continues into the initial Early Bronze Age (Fig. 3).

Summarising, we may assume that during the first half of the third millennium BC the upper Franconian landscape was settled by the "Beaker cultures", and that then in the second half land acquisition in regions of the Franconian Alb commenced. Indeed, evidence of settlement dynamic corresponds more or less with information on settlement development, obtained through pollen analyses from Wetzhausen (see above). Moreover, basing on absolute chronological statistics on sub-fossil tree trunks (Rannen) in the Main and Regnitz rivers (Becker 1983), it appears that the second half of the third millennium BC must have been marked by increased forest clearance. Thus, archaeological evidence of the expansion of settlement areas around 2500 BC concurs with the increase in human indicators observed in pollen analyses and the rannen-sequence.

In essence, scientific data that was attained outside of the settlements themselves is confirmed by the reconstruction of settlement development in Upper Franconia. Therefore, we can assume that the conclusions reached above on continuity in the subsistence strategies of the End Neolithic as compared to the advanced Late Neolithic and the expansion of a pastoral economy and agrarian activities in the course of the second half of the End Neolithic are basically valid.

Continuity in Late Neolithic settlements, the Middle Elbe-Saale area as example

The political-ideological orientation of the respective societies certainly plays a decisive role in the question of continuity between the Late- and End Neolithic, especially in view of the economic continuities between the advanced Late Neolithic and the early End Neolithic, as proven above. A fundamental source is the evaluation of continuing occupation of Late Neolithic settlement sites, on one hand, and of course the entire sphere of grave rituals as perceived in archaeological material, on the other.

As regards the evaluative potential of settlement material, the development in the Middle Elbe-Saale area will now be contemplated. Various works have shown that the Late Neolithic in this area is represented, among others, by the Bernburg ceramic style, in settlements within enclosures as well as in settlements without such earthworks (Müller 2001, 287pp.). Figure 4 clearly illustrates that the respective earthworks were built at regular distances from one another, while other settlement finds of the Funnel Beaker of the Middle Elbe-Saale V (henceforth TRB MES V) seem to be located at their periphery. Investigations on the processing of raw materials also strongly suggest (Müller 1997) that these earthworks displaying a settlement character should be seen as "central settlements" (in the political sense)[2] of the central German Late Neolithic.

Interestingly, evidence of a continued Corded Ware occupation in all of these earthworks is absent. Instead, in six of these nine sites in a specific area of the Harz region (see Fig. 4) graves from the End Neolithic were found, whose original positioning apparently took no consideration of the Bernburg find complexes (cp. Behrens/Schröter 1980, 143, Fig. 81). These graves – mostly Corded Ware – do not differ in any way from those of Corded Ware in the Middle Elbe-Saale area, neither in the wealth of funerary goods nor in the extensive burial preparation. Hence, these interments must implicate one of the distinct functions of a central locality, perhaps even a intentional transformation of the former significance of the particular site. An exception is possibly presented by the Derenburg-Steinkuhlenberg, a fortified site that was relatively long-lived and in its later phase revealed elements of the Schönfeld group along with the Bernburg pottery (cp. Hille 1986; Müller 2001, 154).

The contrary is found in settlements that do not represent centralised places. In 1995 Jonas Beran presented numerous sites of pottery with applied wavy plastic decoration, i.e. "*Wulstleistenkeramik*", which may be addressed as Corded Ware settlement pottery (Beran 1995). Some three-fourths of the total of this pottery were found at sites, which were normal settlements during the advanced Late Neolithic (Fig. 5; list 1). In contrast to the central settlement described above, here we may assume a demographic continuity. This applies in particular when considering the

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[2] The designation/concept "central settlement" is used here as a central locality in the sense of a centre of power. It has, among others, access to supra-regional exchange networks and is supplied with semi-finished products. This model of Late Neolithic central settlements thus represents a form that is distinct from the model for central settlements of the Bandkeramik, proposed for the Rhineland.

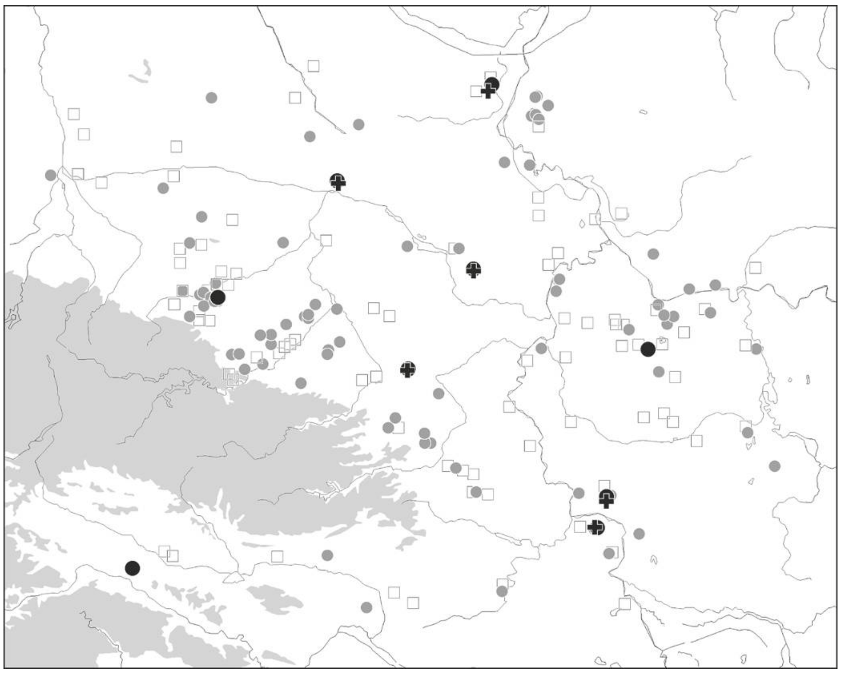

Fig. 4. Late Neolithic earthworks, open (unfortified) settlements and graves in the Middle Elbe-Saale area (after Müller 2001, 303 Abb. 162). Legend: small grey circles – settlements; large black circles – earthworks; squares – graves; crosses – End Neolithic graves at the sites of Late Neolithic earthworks (cp. list 2).

strong evidence for Corded Ware settlement locations as opposed to those of the Late Neolithic.

In the present case the situation in the Middle Elbe-Saale area should be judged with the thought that quite obviously the political-ideological pattern of centralised settlements had ceased with the transition to Corded Ware, while common settlements continued to exist, albeit under altered conditions. By positioning changes in settlement patterns closer to the ideological sphere, the question inevitably and decisively arises as to changes in the sphere of funerary rituals.

Continuity and discontinuity in burial customs

Changes in burial customs often represent indicators of ideological changes in societies. Therefore, since economic and settlement-demographic continuities can be observed at least in some regions from the Late to End Neolithic, while the intentional termination of a political system with centrilocal functions is evident, the important question remains as to how transitions or changes in burial customs can enlarge upon the question. This may be clarified by three aspects.

1.Returning to the Middle Elbe-Saale area, aside from collective graves of the Late Neolithic there is a longer tradition of single-grave burials. In fact, single graves of the TRB MES V already exhibit contracted burials placed on the right or left side besides those in extended supine and other positions (Müller 2001, 363pp., Fig. 220). It is noteworthy that contracted burials on the right side are often furnished with numerous non-ceramic goods, whereas burials on the left side can contain a large amount of pottery. This portrays a tendency in funerary equipment that continues in gender-differentiated form in the Corded Ware. In consequence, the funerary canon with gender differentiation of the End Neolithic TRB-MES V must have already existed here in the Late Neolithic, or at least aspects thereof.

2. In addition to single graves of the Late Neolithic there were also occasional collective graves of that period that evidently experienced an intentional alteration or change in the significance of burial rituals. This would correspond with new burial levels in the nonmegalithic chamber tomb in Remlingen, as presented by Dirks, in which the final interment of a male in contracted position was found in association with the burial of two cattle and

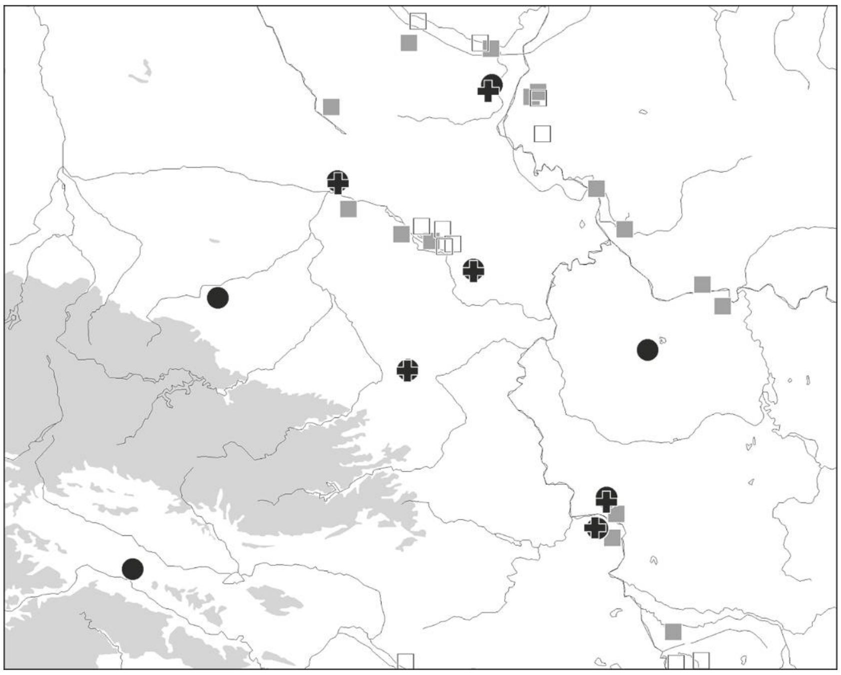

Fig. 5. End Neolithic graves at the sites of Late Neolithic earthworks and of Corded Ware settlement pottery, with or without a continuity from the Late Neolithic settlements (cp. list 1). Legend (see Fig. 4): filled squares – site continuity; open squares – no continuity in a Corded Ware settlement.

the skull of a child (Dirks 2001, 129, Fig. 15). Although the burial is clearly that of the Globular Amphorae, a departure from the custom of collective burials to the individual interment, i.e. individualisation in the sphere of death, is apparent. Similar appearances can be noted in Thuringian Niederbösa, where at least one single grave of the Corded Ware was positioned next to a nonmegalithic chamber tomb with collective burials, likewise an illustration of the tendency towards individualisation (cp. summary by Beier 1984, 147p., Pl. 6).

3. The individualisation of the deceased is carried forth in End Neolithic times, ultimately providing the basis for Early Bronze Age "princely graves", some of which were built on End Neolithic single graves with grave mounds.

In consequence, indications from the Middle Elbe-Saale area signify that a division within part of society likely began already in the Late Neolithic: the individualisation in funerary context became more established with the appearance of burials, in which the deceased was placed in a contracted position on the right or the left side. Yet, the mode of collective burials was not completely relinquished until the End Neolithic.

Interpretation

In summarising the above, the following points become apparent:

- Until now the available evidence of the economic development during the third millennium BC has indicated that continuities into the advanced Late Neolithic do exist. The appearance of the Corded Ware does not signal a new subsistence strategy; quite the opposite, new tendencies can be noted at least two centuries earlier in the Late Neolithic.
- On the contrary, a political spatial order, as observed in the centralised settlements of the Middle Elbe-Saale area, is interrupted as late as the beginning of the End Neolithic. However, settlement-demographic continuities in normal settlements are also indicative of the character of changes: primarily as regards organisational forms within society.
- Corresponding factors are also notable in the funerary sphere. The individualisation of death pervades the Middle Elbe-Saale area only in the End Neolithic, yet tendencies towards a similar individualisation are already notable in the Late Neolithic.

In view of these developmental tendencies, the ideology of Corded Ware may be represented as a division within Late Neolithic society. The new economic powers that led to land acquisition during the advanced Late Neolithic also led to changes in the state of power. The latter transformation took effect only after many generations and is expressed in the Corded Ware's system of signs. Indeed, in the course of the End Neolithic changes resulting from new land acquisition processes, among others, would again become recognisable and serve ideologically in placing the sign-system of the Bell-Beakers in corresponding positions.

List 1

Continuity in Late Neolithic and Corded Ware settlement finds in the Middle Elbe-Saale area (cp. Beran 1995, 86pp. [Catalogue] with Müller 2001, 468pp. [List 1]): Biederitz-Heyrotsberge,-findspot 5. 11. 19; Dessau-Kleinkühnau; Dornburg-Schäferei-sandpit; Eilsleben; Wolmirstedt-Elbeu; Gerwisch findspot 1. 7. 9. 11; Hadmersleben; Halle-Kröllwitz-Kleine Brandberge; Halle-Lettin; Hundisburg; Werschen-Oberwerschen; Brambach-Rietzmeck; Walternienburg; Wallendorf-Wegwitz; Westeregeln; Wolmirsleben-Saueranger findspot 7; Zembschen; Döbritz-Kniegrotte; Höngeda-Feld w Ziegelei-Grube; Stobra; Großlehna.

List 2

Late Neolithic earthworks with End Neolithic burials (detail of map Fig. 4): Barleben-Schweinemästerei (Lies 1966;Lies 1967); Derenburg-Steinkuhlenberg (Hille 1986, 60pp.); Halle-Dölauer Heide (Behrens/Schröter 1980, 59pp.); Morl-Franzigmark (Matthias 1982,121p.); Oschersleben findspot 4 (?) (Schlenker 1998, 10pp.); Quenstedt-Schalkenburg (Behrens/Schröter 1980, 139pp.); Unseburg-Weinberg (Kurzhals 1993; Deffner, pers. comm.).

References

Becker B.1983. Postglaziale Auwaldentwicklung im mittleren und oberen Maintal anhand dendrochronologischer Untersuchungen subfossiler Baumstammablagerungen. *Geologisches Jahrbuch* A 71, 45–59.

K.-E. Behre K.-E. 2000. Frühe Ackersysteme, Düngemethoden und die Entstehung der nordwestdeutschen Heiden. *Archäologisches Korrespondenzblatt* 30, 135–151.

Behre K.-E. /Kucan D. 1994. *Die Geschichte der Kulturlandschaft und des Ackerbaus in der Siedlungskammer Flögeln, Niedersachsen, seit der Jungsteinzeit*. Probleme der Küstenforschung im südlichen Nordseegebiet 21. Oldenburg.

Behrens H./Schröter E. 1980. *Siedlungen und Gräber der Trichterbecherkultur und Schnurkeramik bei Halle (Saale).* Berlin.

Beier H.-J. 1984. *Die Grab- und Bestattungssitten der Walternienburger und Bernburger Kultur.* Neolithische Studien 3.Halle.

Beran J. 1995. Zur chronologischen Gruppierung schnurkeramischer Siedlungsfunde. In: H.-J. Beier/J. Beran (eds.), *Selecta Praehistorica.* Festschrift für Joachim Preuss, 83–96. Wilkau-Hasslau.

Beug H.-J. 1992. Vegetationsgeschichtliche Untersuchungen über die Besiedlung im Unteren Eichsfeld, Landkreis Göttingen, vom frühen Neolithikum bis zum Mittelalter. *Neue Ausgrabungen und Forschungen in Niedersachsen* 20, 261–339.

Dirks U. 2001. Ein Mauerkammergrab der jungneolithischen Bernburger Kultur auf dem Hohberg bei Remlingen, Ldkr. Wolfenbüttel. *Nachrichten aus Niedersachsens Urgeschichte* 70, 105–139.

Dresely V./Müller J. 2001. Die absolutchronologische Datierung der Schnurkeramik im Tauber- und im Mittelelbe-Saale-Gebiet. In: J. Czebreszuk/J. Müller (eds.), *Die absolute Chronologie in Mitteleuropa 3000-2000 v.Chr./The Absolute Chronology of Central Europe 3000-2000 BC.* Studien zur Archäologie in Ostmitteleuropa 1, 287–318. Poznań/Bamberg/Rahden.

Giesecke T. 2001. Pollenanalytische und sedimentchemische Untersuchungen zur Landschaftsgeschichte am Grossen Treppelsee (Ost-Brandenburg, Deutschland). *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 39, 89–112.

Haas J.-N./Giesecke T./Karg S. 2002. Die mitteleuropäische Subsistenzwirtschaft des 3. bis 2. Jahrtausends v.Chr. aus paläoökologischer Sicht. In: J. Müller (ed.), *Vom Endneolithikum zur Frühbronzezeit: Muster sozialen Wandels?* Universitätsforschungen zur Prähistorischen Archäologie 90, 21–28. Bonn.

Hille A. 1986. Die Besiedlung des Steinkuhlenberges bei Derenburg, Kreis Wernigerode (unpubl. M.A. thesis. Universität Halle). Halle.

Jahns S. 2000. Late-glacial and Holocene woodland dynamics and land-use history of the Lower Oder valley, north-eastern Germany, based on two, AMS 14C-dated, pollen profiles. *Vegetation History and Archaeobotany* 9, 111–123.

Knopf T. 2002. *Kontinuität und Diskontinuität in der Archäologie.* Tübinger Schriften zur Ur- und Frühgeschichtlichen Archäologie 6. Rahden/Westf..

Kunow J. 1994. Zur Theorie von kontinuierlichen und diskontinuierlichen Entwicklungen im Siedlungswesen. In: C. Dobiat (ed.), *Festschrift für Otto-Herman Frey zum 65. Geburtstag*, 339–352. Marburg.

Kurzhals A. 1993. Die Kartierung von Keramikmaterial der Grabung Unseburg-Weinberg, Ldkr. Staßfurt. *Ausgrabungen und Funde* 38, 178–185.

Lies H. 1966. Spätneolithische und älterbronzezeitliche Gräber von Barleben, Kr. Wolmirstedt. *Jahresschrift für Mitteldeutsche Vorgeschichte* 50, 61–102.

Lies H. 1967. Ein neolithischer Graben auf einer Elbterasse bei Barleben, Kr. Wolmirstedt. *Ausgrabungen und Funde* 12, 9–12.

Lüning J. 1996. Erneute Gedanken zur Benennung der neolithischen Perioden. *Germania* 74, 233–237.

Lüning J. 2000. *Steinzeitliche Bauern in Deutschland. Die Landwirtschaft im Neolithikum.* Universitätsforschungen zur Prähistorischen Archäologie 58. Bonn.

Matthias W. 1982. *Kataloge zur mitteldeutschen Schnurkeramik Teil V: Mittleres Saalegebiet*. Berlin.

Müller J. 1997. Hinweise auf Arbeitsteilung in der befestigten Bernburger Siedlung Halle-Dölauer Heide? In: K.-D. Jäger (ed.), *Alteuropäische Forschungen* 1, 33–36. Weissbach.

Müller J. 2001. *Soziochronologische Studien zum Jung- und Spätneolithikum im Mittelelbe-Saale-Gebiet (4100-2700 v.Chr.).* Vorgeschichtliche Forschungen 21. Rahden.

Müller J. (ed.) 2002. *Vom Endneolithikum zur Frühbronzezeit: Muster sozialen Wandels?* Tagung Bamberg 14.-16. Juni 2001. Universitätsforschungen zur Prähistorischen Archäologie 90. Bonn.

Reichardt H. in prep. *Landschaftsentwicklung im Unterfränkischen Gäu.* Dissertation, Universität Bamberg, in preparation.

Rösch M. 1990. Vegetationsgeschichtliche Untersuchungen am Durchenbergried. *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 37, 199–255.

Schäbitz F./Garleff K. /Reichardt H. /Haberzettl T. /Ruderich R.. in print. Einfluss von Subrosion und Bodenerosion auf die Landschaftsentwicklung in der Umgebung von Wetzhausen, Unterfranken. *Eiszeitalter und Gegenwart*, in print.

Schibler J. /Hüster-Plogmann H. /Jacomet S. /Brombacher C. /Gross-Klee E. /Rast-Eicher A. 1997. *Ökonomie und Ökologie neolithischer und bronzezeitlicher Ufersiedlungen am Zürichsee: Ergebnisse der Ausgrabungen Mozartstrasse, Kanalisationssanierung Seefeld, AKAD/Pressehaus und Mythenschloss in Zürich.* Monographien der Kantonsarchäologie Zürich 20. Zürich.

Schlenker B. 1998. *Die archäologischen Befunde und Funde im Bereich der Erdgastrasse Wernigerode - Oschersleben, Sonderstrecke 2.* Halle.

Schultze-Motel J. 1969. Kulturpflanzenfunde der Becherkulturen. In: H. Behrens/F. Schlette (eds.), *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen*, 169–172. Berlin.

Schultze-Motel J. /Gall W. 1994. *Archäologische Kulturpflanzenreste aus Thüringen.* Weimarer Monographien zur Ur- und Frühgeschichte 32. Stuttgart.

Schultze-Motel J./Wetzel G. 1979. Pflanzenabdrücke an mittel- und spätneolithischen Gefäßresten. *Veröffentlichungen des Museums für Ur- und Frühgeschichte Potsdam* 12, 51–58.

Seregély T. 2002. Oberfranken während des Endneolithikums (ca. 3000-2000 v.Chr.). In: R. Hofmann/T. Peek (eds.), *„Ötzi - sein Leben, seine Zeit". Oberfranken am Ende der Jungsteinzeit*, 23–40. Tüchersfeld.

Seregély T. in prep. *Endneolithikum und ältere Frühbronzezeit in Oberfranken* (Magisterarbeit Bamberg 2002). Universitätsforschungen zur Prähistorischen Archäologie. Bonn in preparation.

Stobbe A. 1996. *Die holozäne Vegetationsgeschichte der nördlichen Wetterau.* Dissertationes botanicae 260. Berlin/Stuttgart.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

Competing Cosmos. On the Relationships between Corded Ware and Bell Beaker Mortuary Practice

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Introduction

The striking similarities between Corded Ware and Bell Beaker mortuary practices in central Europe have puzzled many generations of scholars. To summarize the situation, while in the Corded Ware culture, men are lying on their right side, head to the West facing South and women vice versa, the preferential axis shifts to North-South in the Bell Beaker phase, all the deceased being buried facing East, women now on their right side and men on their left (Fig. 1). For some, these transformations reflect a genetic relationship, the latter deriving from the former (as formulated in the so-called "Dutch Model": Lanting / Van der Waals 1976), while for others, these only witness interactions between two originally separated cultures that eventually came to be in close contact (as in the Rückstrom hypothesis: Sangmeister 1966). Others participants to this debate, like Fischer or Strahm and his students (Fischer 1976; Strahm 1995; Benz et al. 1998a, b), have bypassed such factual perspective to account for these elements in terms of past people's behaviors.

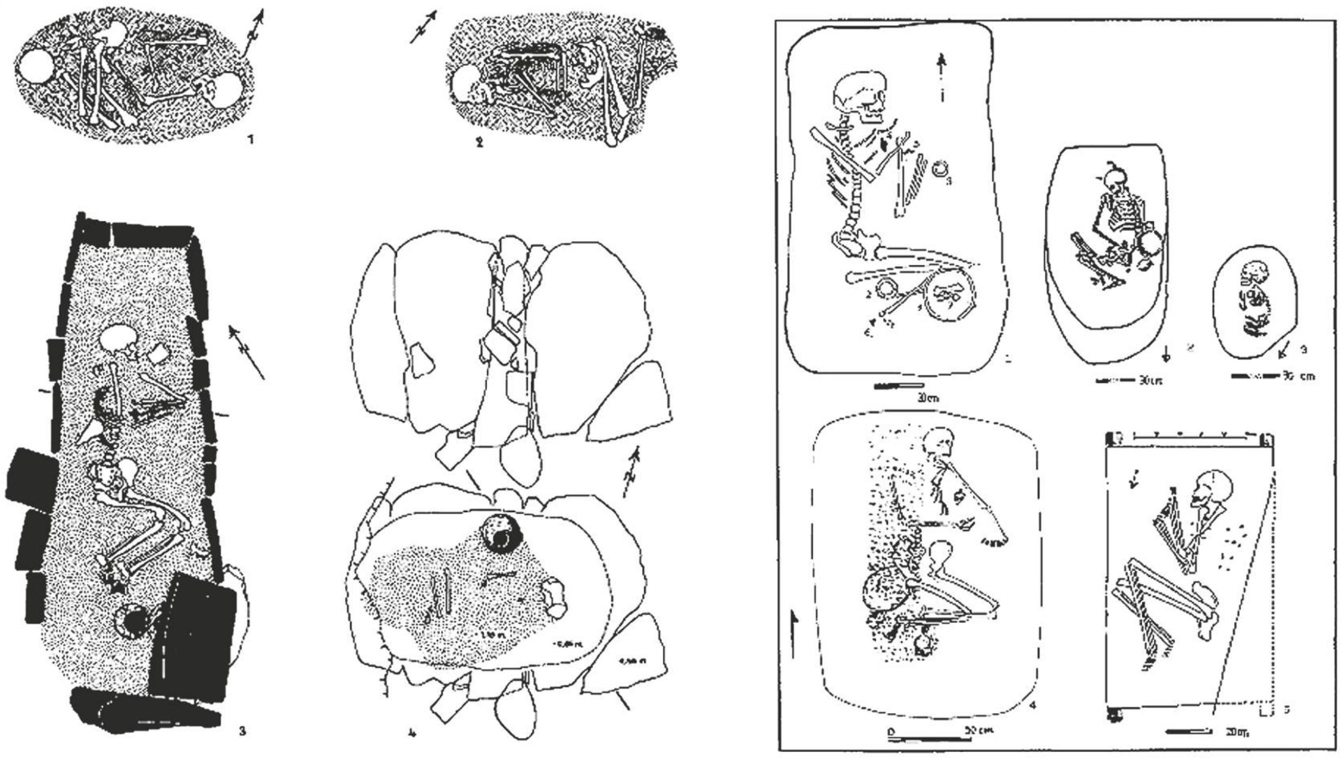


Fig. 1. Comparison of Corded Ware and central European Bell Beaker burials. Left: central German Corded Ware burials illustrating the recurrence of the funeral schema despite formal variability in tomb architecture: 1-2 - flat graves; 3 - funeral cist; 4 - grave covered by stone slab (after Matthias 1969, fig. 1). Right: selected examples of Bohemian Bell Beaker burials: 1 - Prag 8-Kobylisy; 2 - Knezeves I, grave 6; 3 - Knezeves I, grave 13; 4 - Brandýsek I, grave 71; 5 - Lysolaje III, grave 16 (after Hecker 1995, pl. 2).

According to Fischer, the relationships between the Corded Ware and Bell Beaker funeral practices are the material translation of a dialectic in which both cultures are at the same time opposed and closely interdependent (Fischer 1976; Strahm 1997-1998, 11). This process would therefore express a conscious reaction, a deliberate rejection of the Corded Ware ideology by the Bell Beaker communities.

Some, however, do not only reject this last hypothesis but, fundamentally, the simple fact that such differences are meaningful at all. For instance, Mallory considers that it is useless to insist on the change of the side on which the corpse is deposited:

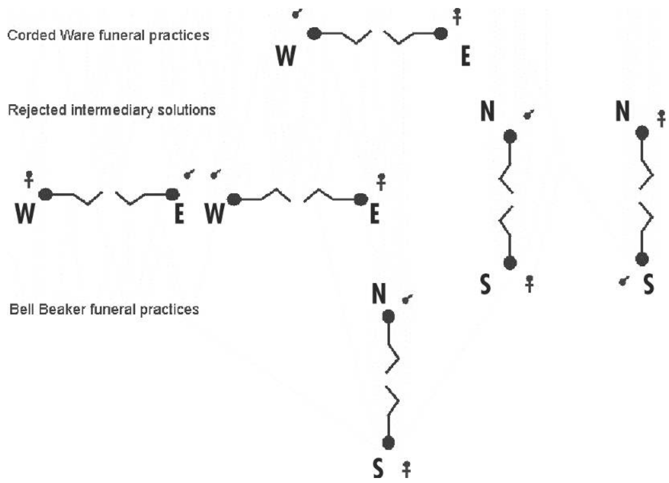
> *This [...] is far more easily explained as a variation in the technique of expressing the same ideology, that is, males are buried right side up rather than right side down* (Mallory 1989, 244).

However, none of these competing readings has ever, to my knowledge, explained the intrinsic nature of the shift in the cosmological reference — from West-East to North-South as preferential axis — and, furthermore, the inversion of the gender disposal simultaneously encountered — men from right to left side, women being subject to the inverse modification. Archaeologists seem to have forgotten to consider the very nature of change, implicitly assuming its historical or anthropological significance. However, if we are to interpret mortuary practices in any significant way — being cultural, social, political or whatever — we first need to understand what is at stake in these formal transformations before succumbing to any interpretive temptation.

In this perspective, I first want to investigate the Corded Ware -Bell Beaker funeral transition from a strictly geometrical point of view, it is to describe in an abstract but formal vocabulary what really changes between the two cultures. This leads to a brief re-evaluation of other archaeological evidence in order to enlighten the interpretation of the Corded Ware – Bell Beaker sequence. Second, I would like to show that the processes outlined for this succession also explain the concurrent development of several cultures of the Early Bronze Age in central Europe.

The Corded Ware vs. Bell Beaker funeral dialectic: a founding ancestor

The major difficulty with the divergences between the Corded Ware and Bell Beaker mortuary practices does not lie in their recognition but rather in the propinquity that ties together these two systems. In both cases, the gender identity of the deceased appears to be the central structuring pattern, as the insertion of the dead according to a restrictive cosmological referential. Available evidence suggests that there must be a direct, if not symbiotic, relationship between these two facets of the funeral system. Indeed, if we spatially represent Corded Ware and Bell Beaker systems, it appears that, in order to pass from the first to the second one, two geometrical transformations must be applied, a symmetry and a rotation, which affect the cosmological axis as well as body disposal procedures (Fig. 2).


Corded Ware funeral practices
W
E
Rejected intermediary solutions
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Bell Beaker funeral practices
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Fig. 2. Schematic representation of the geometric transformations applied to pass from the Corded Ware to the Bell Beaker funeral schema (after Vander Linden 2001a, fig. 68).

The co-existence of these two transformations implies that it is possible to define several abstract funeral formulas that were not used. For instance, women are never inhumed with their head to the West or to the North, orientations to which the dead also never look. The absence of these positions, which merely results of just one of the two geometrical transformations, probably suggests that these were not culturally pertinent and untenable. From this point of view, and without prejudging the potential values attached to cardinal points (an abundant but difficult literature; see for instance Kraig 1978), it seems that the North-West quadrant was negatively connoted in both Corded Ware and central European Bell Beaker cultures. The necessity of those two transformations is thus to be explained by the partial coincidence of the Corded Ware and Bell Beaker cosmos, one change automatically implying the next one.

Before investigating the putative implications of this unexpected cosmological continuity, we should first turn ourselves towards the northern periphery of the Corded Ware culture, most precisely towards one of its Baltic facies, the Swedish-Norwegian Battle-Axe culture (Malmer 1962; 1969). It has been recognized for a long time that the funeral practices of this peripheral group are strictly identical to the central European Bell Beaker ones, Malmer quoting for instance in his seminal work solely 5 burials that fit to the Corded Ware canon for a total sample of 203 simple or double graves (MALMER 1962, 150). Yet, there appears to be no geographical continuity or traces of interaction between these two areas (contra HAÜSLER 1969; see also comments made by LANTING 1971). So, if this funeral similarity is not to be interpreted in culture-historical terms, how to account for it in an historical perspective?

A deliberate rejection of the former Corded Ware system, as initially put forward by Fischer, appears to me as the most effective reading. Indeed, in both cases, we are faced to communities that wanted to distinguish themselves from the Corded Ware block. Yet, this reaction does not entail any radical transformation of the underlying funerary logic but merely passes by a shift in the cosmological setting, and hence body disposal, of the deceased. Actually, the modification of a single rule was not simply untenable but diminished the impact of the criticisms.

Rather than considering this process as a change in burial practices, it would be more correct to apprehend it as a deviation to a peculiar doctrine that, globally, remains the same. This mode of cultural distinction is not, I think, anecdotal. Indeed, as evidenced by subsequent development of the Bell Beaker phenomenon, other funeral ideologies, and thus potential reactionary discourses, were present at this time throughout Europe but none of them was adopted by the communities under consideration here. Albeit it is self-evident that the impact of the various substrata in highly responsible for the funeral and material variability of the Bell Beaker phenomenon (VANDER LINDEN 2001a), I think that the nature of the changes encountered in central Europe point to a specificity of this cultural basin.

We are faced with the Corded Ware – Bell Beaker sequence to phenomena of fission most particularly discernable in the field of mortuary practices, which in turn point out new ways to manage social integration. Actually, once the funeral homogeneity of the Corded Ware culture was challenged by peripheral communities, these consequently readjust other interaction networks, eventually leading to the formation of new social units described today as archaeological cultures, for instance the Bell Beaker "culture". It is not my point here to give primacy to mortuary practices over any other activities; on the contrary, I just want to show that, in this specific case, the fission processes evidenced by mortuary analysis find their direct counterpart in remaining intellectual and material culture (a good ethnographic parallel and illustration is provided by MULLER 1998; on processes of social fission and development see KOPYTOFF 1987). Moreover, as I would like to show now, it is temping to consider the Corded Ware – Bell Beaker dialectic as the prototype of comparable enmity relationships between ideological and cultural groups that dominate a large part of the central European Early Bronze Age.

And so the story goes on: cosmological and social competition in central European Early Bronze Age

It is not the place here to propose a complete re-evaluation of the cultural development of the European Bronze Age. Here, I just want to outline several pathways worth exploring in the enlightenment of the historical dynamics of this period. Extending the argument proposed for the Corded Ware – Bell Beaker transition, I will first deal with the interaction between Epi-Corded and Bell Beaker groups in northern Europe that lead to the formation of the Chłopice-Veselé culture. Second, I will briefly leave the Bell Beaker universe to focus on contacts that intervene between the Maros and Nagyrév – Nitra cultures in the Carpathian basin (Fig. 3).

Looking North: the Chłopice-Veselé culture

My first example is located at the north-eastern periphery of the Bell Beaker area, most especially the Chłopice-Veselé culture in Moravia and Southern Poland (BÁTORA 1991; MACHNIK 1991, 164-166). Several similarities with the Corded Ware culture and the Bell Beaker phenomenon clearly demonstrate their major weight in the development of the Chłopice-Veselé culture. Indeed, one observes a segregation between physical space dedicated to the living and to the dead, the latter being placed in small graveyards, as in the eponym site of Veselé which yielded 37 structures (BÁTORA 1991; Machnik mentions the existence of a few graves within settlements in Moravia: MACHNIK 1991, 164-166). These cemeteries generally contain flat graves with primary individual inhumation (but see the existence of a unique multiple grave in Ivánka Pri Dunaji), whilst some cremations are known (as in Starachowice), as funeral mounds at the eastern periphery, both practices being fairly frequent in other archaeological cultures North and East of the Carpathian mountains (MACHNIK 1991, 164-166). Most Chłopice-Veselé burials reproduce the classical Corded

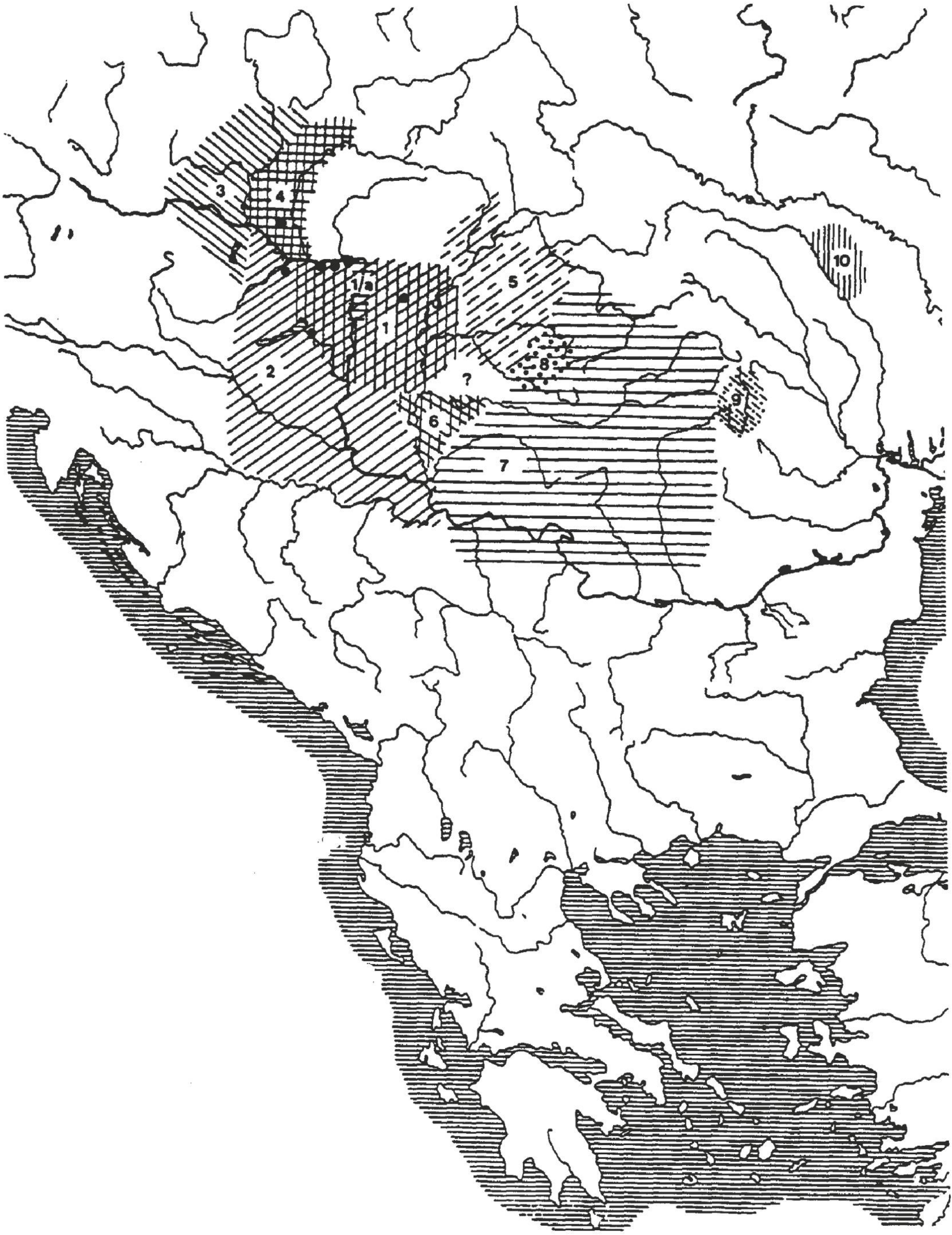

Fig. 3. Simplified location map of the archaeological cultures of the Early Bronze Age in the Carpathian Basin. 1 - Early Nagyrév; 2 - Bell Beaker / Csepel; 3 - Late Somogyvár-Vinkovci; 4 - Chłopice-Veselé; 5 – Nyirség; 6 - Early Maros; 7 - late Schneckenberg-Glina III; 8 – Roşia; 9 – Jigodin; 10 - Edinetz (after Kalicz-Schreiber / Kalicz 1998: fig. 2); ? single Bell Beaker find.

Ware disposal pattern, albeit exceptions are recorded: deviations to the East-West axis (South-West/North-East or East-South-East/West-North-West axes) and, in a few cases, graves oriented on the North-South axis (Bátora 1991, 121-131). In this case, men may be placed on their right side with the head towards the South or the South-West, and women conversely on their left side with their head to the North-East or the North (Machnik 1991, 164-166). Moreover, as in the Corded Ware and Bell Beaker complexes, men are inhumed with various sets of weapons (arrowheads, battle-axes, stone wrist-guards) and, rarely, with ornaments (ear pendants, bracelets, copper necklaces, boar tusks). Women, on their side, are generally given ornaments (ear pendants, bracelets, sometimes composed of bone elements) and awls. Pottery is found with all individuals (Bátora 1991; Machnik 1991, 164-166).

The aforementioned exceptions to the classical disposal pattern will retain our attention for a little moment. Indeed, their existence is of primary importance since some of them illustrate original disposal procedures, like the more frequent use of South-West/North-East axis. There are also some disposal procedures that we had recognized as culturally irrelevant in the previous analysis of the Corded Ware – Bell Beaker transition, it is the placing of women with their head towards the North or, symmetrically, of men towards the South. Thus, from a strictly geometrical point of view, it seems that, in order to pass from the Corded Ware schema to this one, a single rotation was applied. How to interpret this pattern?

Contrary to the Corded Ware – Bell Beaker example, I think that we are no more faced to processes of social distinction but to an other kind of social interaction, a dialogue between neighboring communities that share closely related systems, but that do not have enough historical temporal depth to remind the distance that separates them. From this point of view, the variability of the Chłopice-Veselé funeral practices probably indicates a loss of pregnancy of the cosmological conceptions of both Corded Ware and Bell Beaker systems, a process that will be fully accomplished with the Únětice culture (see below). Whatever, these discussions exemplify the limits of the integrative capacities of the Bell Beaker phenomenon, with the development of processes of regionalization of a yet unknown scale.

Looking South: Maros vs. Nagyrév – Nitra

Our second case-study will bring us more deeply in the Carpathian basin, at the south-eastern border of the Bell Beaker phenomenon.

Mortuary practices of the Csepel group illustrate, as other elements of material culture, the strong assimilation of Bell Beaker traits by the local communities. The most significant trait is surely the co-existence, with exceptional proportions for the Bell Beaker phenomenon, of single primary burial with cremation (cinerary urn or in flat grave, German Brandschüttungsgrab; Kalicz-Schreiber / Kalicz 1998). Cremations and inhumations are always present at the same time in graveyards but with changing frequences (Tököl with 71 graves, of which 36 cremations; Békásmegyer with 95 graves including 84 cremations; Budakalász with 8 cremations; Csepel-Bucem with 15 cremations: Kalicz-Schreiber 1976; Hakelberg 1995; Machnik 1991, 84-88).

Inhumations are generally placed on a North-South axis, some dead on their right side, head to the North, others lying on their left side, head to the South, a pattern that strongly recalls classical central European Bell Beaker funerary practices, albeit anthropological data are too rare to fully assure this interpretation (Machnik 1991, 84-88). Cinerary urns are always amphorae with a bowl using as a lid, with other associated vases. Cremation pits, which recall inhumation graves by their shape, dimension and orientation, contain ash deposits made of bones and remains of the funeral pyre.

Classical Bell Beaker artifacts are rare and are not distributed haphazardly among funeral types: beakers, daggers, wrist-guards and V-buttons are often, but not always, associated to inhumation burials and cremation pits, albeit few beakers were found near cinerary urns (Kalicz-Schreiber 1976; Machnik 1991, 84-96).

All these elements, as well as the scarcity of other Bell Beaker elements in settlements and the outlying localization of the Csepel group, give the impression that we are faced here to a separate community, apparently lost in the middle of nowhere. Yet, this perception remains unsatisfactory unless we try to highlight the exact nature of the relationships of the Csepel group with its neighbors (see for instance Kalicz-Schreiber / Kalicz 1998).

The first one under consideration here is the Maros group, which lies at the confluent of the Tisza and the Danube rivers and is assigned by radiocarbon dates to the second half of the third millennium and the first half of the next one (O'Shea 1991; see also Girić 1989; Sandor-Chicideanu / Chicideanu 1989; Machnik 1991, 122-128). Maros mortuary practices are well known thanks to the excavations of several cemeteries as in

Mokrin (Vojvodina: O'Shea 1995, 1996; Rega 1997). Graveyards regroup between 40 and 60 primary individual burials. A double grave, a cenotaph and few cremations are also documented. The funeral system is strictly homologous to central European Bell Beaker funeral practices: dead are buried in a flexed position, lying on a North-South axis, men on their left side, head to the North, women on their right side, head to the South. Interestingly, this pattern also prevails for the numerous children — albeit peri-natal individuals are surprisingly lacking (Rega 1997; see Masset 1992) — hence suggesting a strict identity between biological and gender identity (Rega 1997).

Second, we need to briefly consider the northerly Nagyrév – Nitra culture (for a general presentation of the Nagyrév culture, see Machnik 1991, 107-115). This culture is characterized by an explosion of the number of dead which are given a burial. Indeed, one observes a gradual augmentation of the number of graves in the cemeteries, leading, in the late phase, to necropolises of 300 up to 500 flat graves, generally organized in rows (see Shennan 1975; Bátora 1991). Some mounds are also recorded in these cemeteries, which may partially explain the general absence of cross-cuttings between the graves; for instance the structure 62 in Branč was surrounded by a peripheral trench with post-holes (Bátora 1991). The existence of funeral houses is mentioned in the literature (Bátora 1999).

Nagyrév – Nitra funeral procedures reproduce Corded Ware customs. Graves usually contain a single primary inhumation, men being crouched on their right side, head to the West looking South, and women vice versa (Shennan 1975; Bátora 1991, 112-129). Cremations appear to be more frequent in southern groups (O'Shea 1996). Several derogations to these rules are documented and concern every facet of the ritual. For instance, there are deviations up to 45° of the West-East axis, and even some graves placed on a North-South axis, in this case the deceased looking westward. Likewise, some individuals were buried on their back, generally with more grave goods or disposed in more elaborated tombs. Moreover, 47 multiple burials have been discovered in 9 cemeteries (39 double graves, 4 triple, 2 quadruple, 1 quintuple et 1 with seven dead). All possible combinations are found in the double graves (man-woman, man-child, woman-child, child-child). At least one case of re-opening of the grave, but not related to plundering, is known: in grave 82 of Branč, the bones of the right leg of a young woman have been disconnected and placed against the northern wall of the tomb, a practice that Bátora interprets as a precaution against a vampire (Bátora 1991, 126). The high frequency of these exceptions, that mostly concerns the late phase, may be apprehended either as the expression of less restrictive funeral practices, either, more prosaically, as the outcome of the increasing of quantity of both sites and graves.

As in all the aforementioned archaeological cultures, gender identity is the structuring element in the choice of grave goods (Bátora 1991, 130-133, 135-138). Men are thus inhumed with axes, battle-axes, copper daggers, knives, flint arrowheads, wrist-guards, flint tools, boar tusks, bone awls and, rarely, with ornaments (ear pendants, rings, bracelets, toggles, necklaces, amulets) and pottery. Women, on their side, are richly adorned (ear pendants, hair-pins, rings, varied bracelets). This importance of body ornament is particularly well established, as indicated by the vast quantities of bone pearls found in Nagyrév cemeteries (for instance 12.000 in Branč: Bátora 1991, 103-104; Shennan 1975; see also Treherne 1995).

While the near complete absence of „classical" Bell Beaker graves in the Csepel group suggest, at first sight, that the Bell Beaker ideology had no success in the Carpathian basin, I think that the relationship between the Maros and the Nagyrév cultures allows us to reconsider this point. According to John O'Shea, the differences between the Maros and Nagyrév cultures are reduced since, besides the preference for inhumation in the first one and for cremation in the second one, both cultures exemplify normative procedures to deal with the dead, contrary to contemporary neighboring cultures of the Carpathian basin (O'Shea 1996, 321-359). Yet, I think that the use of divergent cosmological references sharply differentiate the Nagyrév and Maros cultures. This pattern can be interpreted in closely related terms than the explanation put forward for the Corded Ware – Bell Beaker opposition: the Bell Beaker schema, which had no local antecedent, would have been recuperated by the Maros communities as part of politics of social distinction from the Nagyrév cousins, a decision that was maybe reinforced by their adoption of cremation. Thus, the Bell Beaker funeral ideology, partially blurred in the Csepel group, would have a unexpected success in a foreign culture because of social conditions which would correspond to the processes that led to its emergence.

The Nagyrév culture is progressively replaced by the Únětice culture, a complex process evidenced by funeral practices. The Moravian group of this culture indeed presents several specificities that illustrate the interactions of this expansionist culture with the substrata on which it superimposes. In the Velké Pavlovice cemetery (southern Moravia: Stuchlík/Stuchlíkova 1996), dead are generally placed on a West-East axis, face towards the South, men lying on their right side, women on their left. For a total of 22 graves in this small site, only one strictly follows the Únětice funeral norms, it is the deceased placed on his back, with the head to the North. We are here faced to the disappearance of the strict funeral Bell Beaker schema, as anticipated by the Chłopice-Veselé and Nagyrév – Nitra cultures.

Conclusion:
divided we stand

As I have already said, my purpose is by no means to privilege in a way or another mortuary practices in the conduction of the inquiry. Indeed, preliminary conclusions gained by mortuary analysis only become meaningful when they are tested against other archaeological material (Vander Linden 2001a, b). For instance, the relationships between Corded Ware, Bell Beaker and various central European Early Bronze Age cultures are characterized by patterns of competition between neighboring communities, reflected by fast changing frames of cosmological mortuary reference and, jointly, by the readjustment of the other networks of social integration.

Yet, from a strictly Bell Beaker point of view, this process is specific to central Europe. Cultural development in Mediterranean Europe mostly depends of the substrata on which the Bell Beaker phenomenon superimposes and interacts with. Likewise, such fission patterns are not found in the north-western area. Here, people seem to have put less interest in cosmology than in the monumentality of death. Indeed, in the Lower Rhine basin and the British Isles, cosmological frames of reference often change, being on a geographical or temporal scale, whilst dead are materialized in the landscape under the form of mounds of circular shape (Clarke 1970, Lanting / Van der Waals 1976; it must be noted that the continuing use of funeral mounds and the multiplicity of cosmological variations are also diagnostic of the Bronze Age in much of the Low Countries: Lohof 1994).

If we agree to see in the lower Rhine basin the origins of the Bell Beaker phenomenon (a virulent debate: on the so-called "Dutch model" see Lanting / Van der Waals 1976; Harrison 1980, 17-41; Strahm 1979; Van Der Beek / Fokkens 1998; Vander Linden 1998, 2001a), it becomes obvious that the eastward diffusion of this complex goes along with a lost of visibility of the dead and the formalization of the other funeral practices. This process is likely to be the outcomes of a deliberate wish by the Bell Beaker communities to distinguish themselves from the Corded Ware culture, and, maybe, the expression of a qualitative loss of power of the dead in front of other supernatural warrants of the social structure that legitimate the Bell Beaker expansionist wishes. Thus, the success of the Bell Beaker trends in central Europe is, for most, the success of a qualitatively equal but reactionary discourse to the ideological options that assured the coherence of the Corded Ware culture. This process, mostly distinguishable in the confrontation of the cosmological schemes, explains the exclusive geographical setting of these cultures.

If we try to bypass the Bell Beaker problem by considering the subsequent Early Bronze Age in central Europe, we do not merely observe a continuity from Corded Ware and Bell Beaker times, but strictly similar paths of social evolution. Development proceeds from successive fissions within a unique somewhat homogenous cultural basin. In this case, the conjunction of various networks of interaction, indicated by mortuary practices or other elements of material culture, and their common change suggest that we are not faced to abstract entities called archaeological cultures, but rather constantly competing and struggling communities.

Acknowledgments

The ideas expressed here are taken form my PhD. dissertation, presented at the University of Brussels under the supervision of prof. Paul-Louis van Berg. This research was carried out thanks to a grant provided by the F.N.R.S. (Belgian National Fund for Scientific Research). Many people helped me throughout these years, especially by discussing the topic of funeral archaeology: P.-L. van Berg, N. Cauwe, A. Duplouy, S. Lemaitre, L. Nilsson, but none of them is responsible for above mistakes and/or misinterpretations.

References

Bátora J. 1991.The reflection of economy and social structures in the cemeteries of the Chłopice-Veselé and Nitra cultures. *Slovenská Archeológia* 39, 91-142.

Bátora J. 1999. Gräber mit Totenhäusern auf frühbronzezeitlichen Gräberfeldern in der Slowakei (Beitrag zu Kulturverbindungen zwischen Mittel-, West- und Osteuropa). *Praehistorische Zeitschrift* 74, 1-57.

Benz M. / Gramsch A. / Wiermann R. / Van Willingen S. 1998. Rethinking Bell Beakers. In: Benz M. / Van Willingen S. (eds.), *Some new approaches to the Bell Beaker phenomenon. Lost Paradise…?* Proceedings of the 2nd meeting of the "Association Archéologie et Gobelets" Feldberg (Germany), 18th-20th April 1997. British Archaeological Reports, International Series 690, 181-191. Oxford.

Benz M. / Strahm C. / Van Willingen S. 1998. Le Campaniforme: phénomène et culture archéologique. *Bulletin de la Société Préhistorique Française* 95, 305-314.

Clarke D.1970. *Beaker pottery of Great Britain and Ireland.* Cambridge.

Fischer U. 1976. Die Dialektik der Becherkulturen. *Jahresschrift für Mitteldeutsche Vorgeschichte* 60, 235-245.

Girić M. 1989. Ostojicevo, ein bronzezeitliches Gräberfeld. In: *Das Äneolithikum und die früheste Bronzezeit (C14 3000-2000 b.c.) in Mitteleuropa: kulturelle und chronologische Beziehungen.* Acta des XIV. Internationalen Symposiums Prag – Liblice 20.-24. 10. 1986. Praehistorica XV, 239-241. Praha.

Hackelberg D. 1995. Mährische Gruppe: Mähren, Niederösterreich und Ungarn. In: Strahm C. (Hrsg.), *Das Glockenbecher-Phänomen. Ein Seminar*, 29-40. Freiburg i. Breisgau.

Harrison R.J. 1980. *The Beaker Folk. Copper Age Archaeology in Western Europe.* London.

Haüsler A. 1969. Die östlichen Beziehungen der schnurkeramischen Becherkulturen. In: Behrens H. / Schlette F. (Hrsg.), *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen.* Vorträge der Tagung 1967, 255-274. Berlin.

Hecker V. 1995. Böhmische Gruppe: Böhmen. In: Strahm C. (Hrsg.), *Das Glockenbecher-Phänomen. Ein Seminar*, 41-66. Freiburg i. Breisgau.

Kalicz-Schreiber R. 1976. Die Probleme der Glockenbecherkultur in Ungarn. In: Lanting J.N. / Van der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 183-215. Bussum/Haarlem.

Kalicz-Schreiber R. / Kalicz N. 1998. Die Somogyvár-Vinkovci-Kultur und die Glockenbecher in Ungarn. In: Fritsch B. / Maute M. / Matuschick I. / Müller J. / Wolf C. (Hrsg.), *Tradition und Innovation. Prähistorische Archäologie als Historische Wissenschaft.* Festschrift für Christian Strahm, 325-347. Rahden/Westf.

Kopytoff I. 1987. The Internal African frontier: the making of African political culture. In: Kopytoff I. (ed.), *The African frontier. The reproduction of traditional African societies*, 4-84. Bloomington.

Kraig B. 1978. Symbolism in burial orientations among early Indo-Europeans. *The Journal of Indo-European Studies* 6, 149-172.

Lanting A.E. 1971. Corded Ware and Bell Beaker culture. The Halle 1967 Symposion: a review article. *Helinium* 11, 270-287.

Lanting J.N. / Van der Waals J.D. 1976. Beaker culture relations in the Lower Rhine basin. In: Lanting J.N. / Van der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 2-80. Bussum/Haarlem.

Lohof E. 1994. Tradition and change. Burial practices in the Late Neolithic and Bronze Age in the North-Eastern Netherlands. *Archaeological Dialogues* 1, 98-132.

Machnik J. 1991. *The Earliest Bronze Age in the Carpathian Basin.* Bradford.

Mallory J.P. 1989. *In Search of the Indo-Europeans. Language, archaeology and myth.* London.

Malmer M.P. 1962. *Jungneolithische Studien.* Bonn.

Malmer M.P. 1969. Die schwedisch-norwegische Streitaxtkultur. In: Behrens H. / Schlette F. (Hrsg.), *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen.* Vorträge der Tagung 1967, 215-225. Berlin.

Masset C. 1992. L'étude des sépultures et la paléosociologie. In: Garanger J. (ed.), *La préhistoire dans le monde*, 263-279. Paris.

Matthias W. 1969. Die Schnurkeramik in westlichen Mitteldeutschland. In: Behrens H. / Schlette F. (Hrsg), *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen.* Vorträge der Tagung 1967, 9-28. Berlin.

Muller J.-C. 1998. *Jeux de miroirs. Structures politiques du haut plateau nigérian.* Paris.

O'Shea J. 1991. A radiocarbon-based chronology for the Maros group of southeast Hungary. *Antiquity* 65, 97-102.

O'Shea J. 1995. Mortuary custom in the Bronze Age of southeastern Hungary. Diachronic and synchronic perspectives. In: Beck L.A. (ed.), *Regional approches to mortuary analysis*, 125-145. New York.

O'Shea J.M. 1996. *Villagers of Maros. A portrait of an Early Bronze Age society.* New York.

Rega E. 1997. Age, gender and biological reality in the Early Bronze Age cemetery at Mokrin. In: Moore J. / Scott E. (eds.), *Invisible people and processes. Writing gender and chidhood into European archaeology*, 229-247. London.

Sandor-Chicideanu M. / Chicideanu I. 1989. Zu den Gräbsitten der Periam-Pecica Kultur. *Dacia* 33, 5-38.

Sangmeister E. 1966. Die Datierung des Rückstroms der Glockenbecher und ihre Auswirkung auf die Chronologie der Kupferzeit in Portugal. *Palaeohistoria* 12, 195-407.

Shennan S. 1975. The social organization at Branč. *Antiquity* 49, 279-288.

Strahm C. 1979. Kalibration und die Herkunft der Glockenbecher. *Archives Suisses d'Anthropologie Générale* 43, 285-293.

Strahm C. (Hrsg.) 1995. *Das Glockenbecher-Phänomen. Ein Seminar.* Freiburg i. Breisgau.

Strahm C. 1997-1998. Le Campaniforme: phénomène et culture. Rhône-Alpes A 404. L'énigmatique civilisation campaniforme. *Archéologia hors-série* 9, 6-12.

Stuchlíkova J. / Stuchlík S. 1989. Die historische Bedeutung des mährischen Raumes im Spätneolithikum und der frühen Bronzezeit. In: *Das Äneolithikum und die früheste Bronzezeit (C14 3000-2000 b.c.) in Mitteleuropa: kulturelle und chronologische Beziehungen.* Acta des XIV. Internationalen Symposiums Prag – Liblice 20.-24. 10. 1986. Praehistorica, XV, 187-192. Praha.

Treherne P. 1995. The warrior's beauty: the masculine body and self-identity in Bronze-Age Europe. *Journal of European Archaeology* 3, 105-144.

Van Der Beek Z. / Fokkens H. 1998. 24 years after Oberried: the 'Dutch Model' reconsidered. In: Nicolis F. / Mottes E. (eds.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe.* International Colloquium. Riva del Garda (Trento, Italy). 11-16 May 1998. Abstracts, 45-47. Trento.

Vander Linden M. 1998. La révolution spatiale du Campaniforme: essai sur les structures spatiales du Campaniforme en Europe du Nord-Ouest. In: Cauwe N. / Van Berg P.-L. (dirs), *Organisation néolithique de l'espace en Europe du Nord-Ouest.* Actes du XXIIIè colloque interrégional sur le Néolithique (Bruxelles, 24-26 octobre 1997). Anthropologie et Préhistoire. Bulletin de la Société royale belge d'Anthropologie et de Préhistoire 109, 277-292.

Vander Linden M. 2001a. Archéologie, complexité sociale et histoire des idées: l'espace campaniforme dans l'Europe du troisième millénaire avant notre ère. Unpublished Ph.D. dissertation. Bruxelles.

Vander Linden M. 2001b. Beer and beakers: a tentative analysis. In: Gheorghiu D. (ed.), *Material, virtual and temporal compositions: on the relationships between objects.* Papers from a session held at the European Association of Archaeologists Fifth Annual Meeting in Bournemouth 1999. British Archaeological Reports International Series 953, 45-51. Oxford.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

Bell Beakers in the Sequence of the Cultural Changes in South-western Baltic Area

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The main thesis of this paper is as follows: in the discussed space (south-western Baltic zone, Fig. 1) and time (3rd and early 2nd millennia BC) there existed a specific variety of society and culture which, despite its internal wealth and diversity, kept its cohesion and contrasted with neighbouring structures (Czebreszuk 2001). The society was undergoing socio-cultural changes in which a special role was played by BB.

On the one hand BB were part of these changes as one of their stages. A comparison of chronologies of individual culture structures in the south-western Baltic zone (Fig. 2) shows how complicated a process it was. Its major stages, namely, the Single Grave culture (SGC), Bell Beakers (BB) and Riesenbecher-Trzciniec (R-T) do not exclude one another, quite on the contrary, they had long periods of co-occurrence in individual regions. Besides them, there existed other phenomena as, for instance, the northern zone of Únětice culture impact.

On the other hand, BB were a central and turning point of this process. For within them we deal with the richest set of material culture traits that must have been connected to a developed living culture.

I. Preliminary assumptions

Several preliminary assumptions have been made.

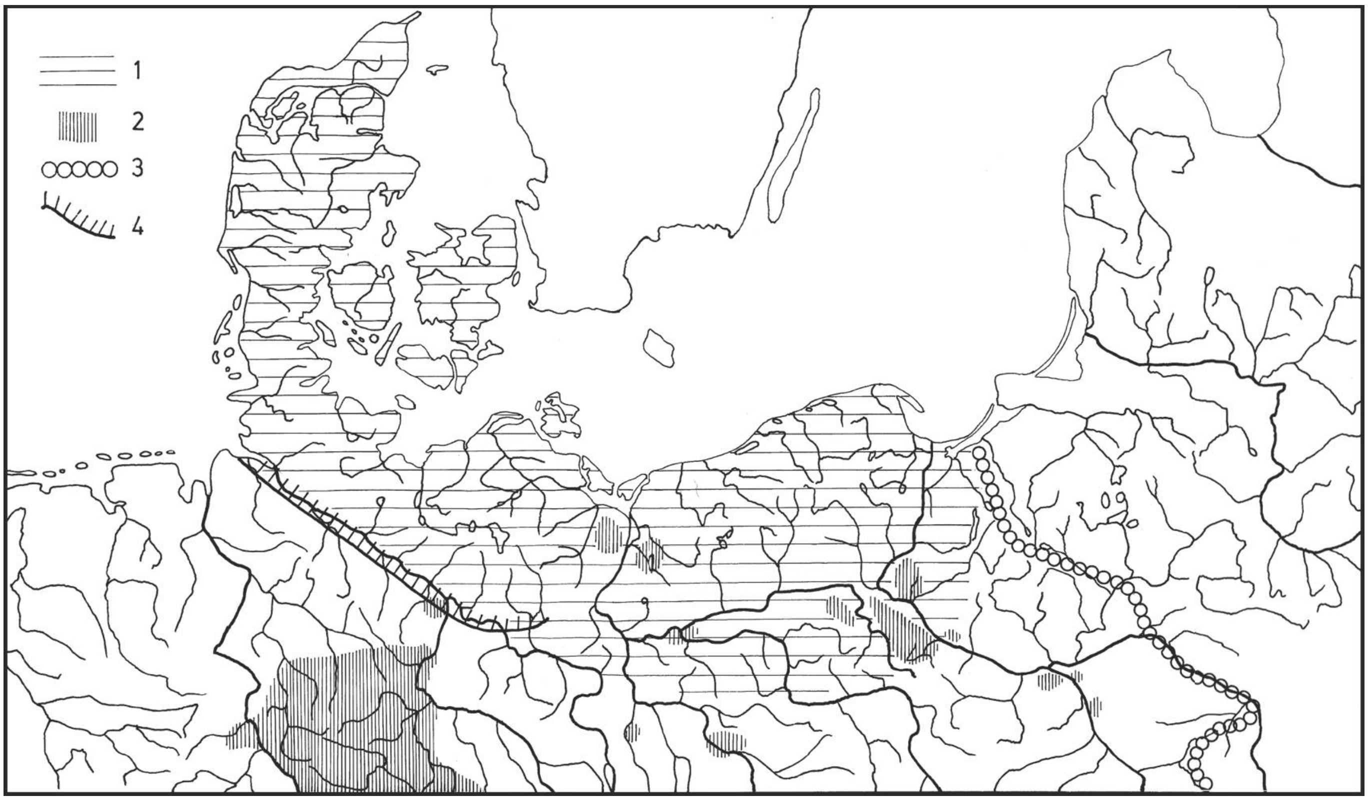


Fig. 1. Area discussed in the paper (Czebreszuk 2001, Fig. 1). 1 – area discussed in the paper; 2 – northern range of Linear Band Pottery, 3 – northern section of the Bug-Dniestr boundary (Kośko 1981, Fig. 33), 4 – south-western boundary of the Oldesloe culture.

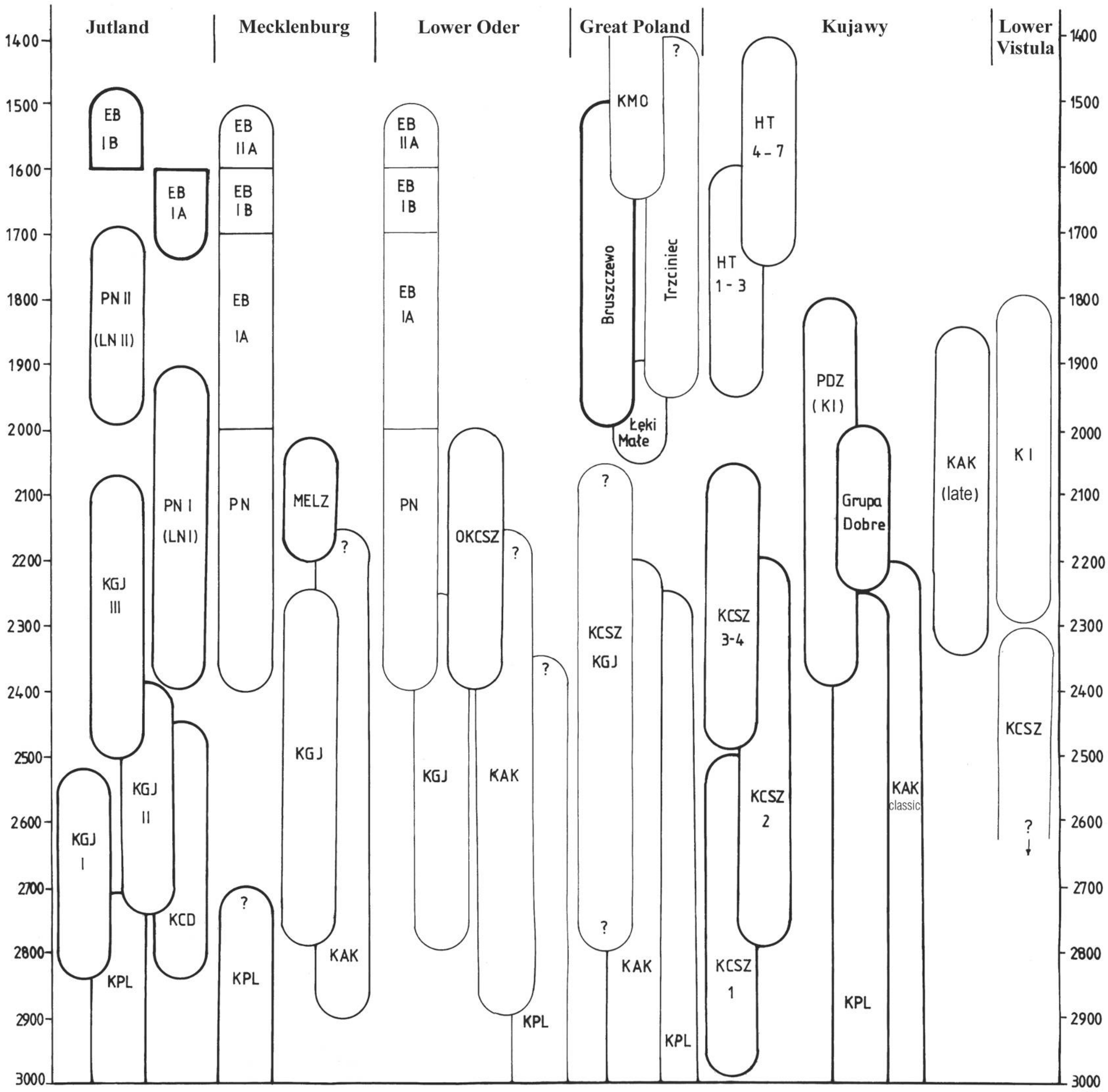


Fig. 2. The absolute chronology of cultural phenomena on the south-western Baltic in the 3rd millennium BC and in the first half of the 2nd millennium BC (Czebreszuk 2001, Fig. 9). The thickest contour is used for units whose chronology is based on dendrochronology and ^{14}C dates, thick contour for those based on ^{14}C dates, thin contour for those relying on comparative chronology with an auxiliary role of ^{14}C dates, the thinnest contour for those relying solely on comparative chronology. The following abbreviations are used: EB – Bronze Age, Kmo – Tumulus culture, KCD – Pitted Ware culture, OKCSZ – Oder group of the CWC, PN – Late Neolithic, KGJ – Single Grave Culture, KPL – Funnel Beaker culture, KAK – Globular Amphora Culture, KCSZ – CWC, HT – Trzciniec horizon, PDZ – Bell Beakers, KI – Iwno Culture.

The first assumption concerns the religious nature of the culture in the period of transition from the Neolithic to the Bronze Age. It was in religious categories that the then culture was expressed. Also, a mythical language was used to codify the cultural heritage related to different types of activity, from purely ideological issues to various kinds of industry such as pottery or metallurgy.

According to the second assumption, material culture (specifically the skill of making objects) is believed to be the main manifestation of cultural tradition and content. The heritage, codified by religion, did not have to be conceptualized. Let me cite here a meaningful anthropological observation which shows that the primary form of initiation of new members of a group (particularly children) is not a verbal instruction but imitation. Anthropology often stresses the fact that in primitive societies all actions are repetitions of acts performed *in illo tempora* by a mythical being or the founder of a community in question. Everything is done the way in which it was once and for the first time done by the „Forefather". This is true both for such everyday matters as pottery-making and such fundamental ones as the myth of creation. It is usually the repetition of the latter that is re-enacted in ritual dance or a sequence of dramatized gestures during a suitable ritual. In fact, what we deal with in primitive societies is a clear prevalence of expression in the categories of the „world of matter" over those of the „world of thought". A thought or idea could have been a commentary on actions repeated in imitation. The products of such actions were as a rule material objects making up what we call material culture. Hence, no words were needed.

During the studied period of prehistory a certain phenomenon developed, however, which was the beginning of an end of these mechanisms of invariability petrifying traditional culture. This phenomenon is individualization — the third major assumption of this work. According to this assumption, in the analyzed period, certain structures evolved in society within which the subjects of social relationships were no longer of purely collective character but also individual. It can be claimed that for an archaeologist individualization is most readily observable in funerary rites. Prior to the SGC, a burial was a passage from one community (of the living) to another (of ancestors). A deceased moved carrying gifts from the living for the dead (to make them friendly towards the living). Beginning with the SGC, a deceased is given a set of objects that he or she needs to continue their earthly activities in the other ('better') world. Hence, they are no longer envoys, but himself or herself; they do not represent the community any more, but himself or herself.

The once more of the assumptions precludes the use of large migrations to explain transformations taking place in the Baltic zone in the period of transition from the Neolithic to the Bronze Age.

The last assumption consists in replacing the concept of 'archaeological culture' with that of 'cultural package' in the descriptions of cultural units as C. Burgess proposed (Burgess 1976). Taking his proposition as a point of departure, I suggest to make the definition of cultural package more specific and clear (Czebreszuk 2001, 44-47). Its most important characteristics are as follows:

1. Calling a phenomenon a package does not unequivocally determine its cultural character; as many other archaeological concepts, a package does not connote one and only one characteristic of a living culture; in this sense the concept of package refers to the form and not the subject-matter of a given phenomenon.

2. Nevertheless, a complex of objects called a cultural package is always related to a specific cultural subject-matter.

3. A package refers to a narrow cultural aspect, i.e. it concerns a single custom, institution or a subpopulation in a given cultural group; other elements of a given culture are not radically modified upon the appearance of a package.

4. The complex of traits making up a given package, both material (set of objects) and spiritual ones (idea related to the set) must have been significantly culturally valued, which is indicated by vast geographical ranges of individual packages.

5. It is possible to find a location (region) where a given package came into being; the „original" form of a package usually differs from its „classic" form (it changes with time).

6. A package is subject to dissemination; the mechanism of this process is mainly based on cultural contact; hence a package spreads among societies that have already been in some kind of contact, i.e. the routes of its expansion reveal traditional channels of cultural contact.

7. It is a taxonomically (formally) dynamic phenomenon, possibly culturally (content-wise), too. It varies from region to region — a given cultural package is similar in individual regions but never the same (it has a regional peculiarity).

8. The final stage of investigation of a given package should be an interpretation of its character and cultural dynamism, i.e. an answer to the question what cultural trait a given package reveals and what the cultural content of its dynamism is.

II. Corded Ware package

The beginnings of the rise of the Corded Ware culture (CWC) are marked by the „invention" of individualization outwardly manifested by single grave burials whose grave-goods included assemblages of „private" objects. The fact that individualization began in the societies in which the process of complicating social structures intensified should not come as a surprise, but it should not be treated as a logical necessity, either. The phenomenon of individualization is an essential change revealing a profound social revolution.

The CWC marks also the stage of ranked societies

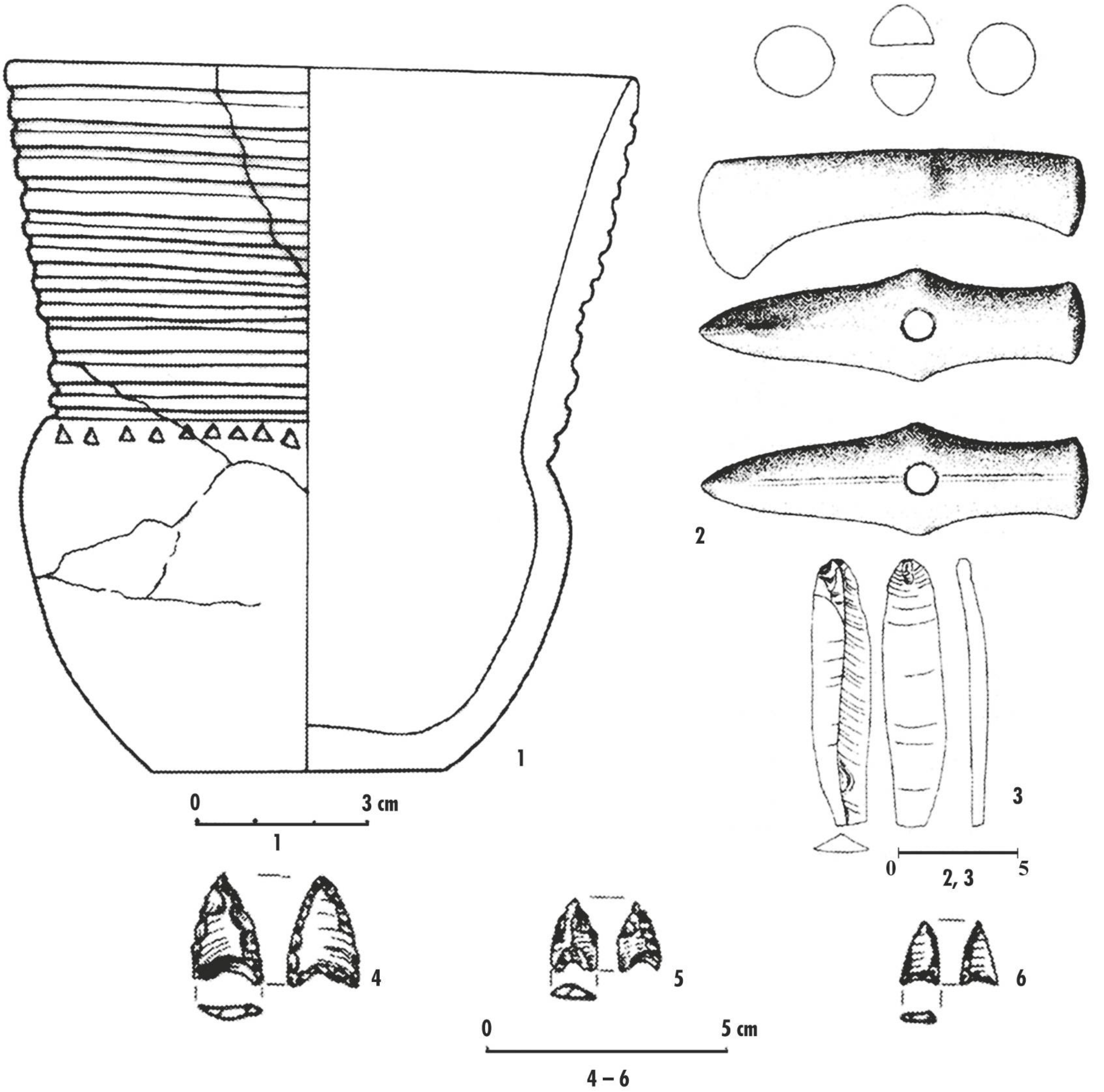


Fig. 3. Corded Ware Culture package. 1- beaker (Krusza Zamkowa, Kujawy; Kośko 1992, Fig. 2: 1), 2 – ax, 3 – flint blade (both: Tjæreborg, Jutland; Siemen 1997, Fig. 8: 2,5), 4 – 6 arrowheads (Żerniki Górne, Little Poland; Kempisty / Włodarczak 2000, Fig. 57: 4-6).

in which the age group of adult men (warriors-hunters) evolved into a secret society. Membership of the society was using (Fig. 3) ritual beakers, stone axes, flint knives (the remnant of which is the flint flake) and an archer's kit (of which flint arrow-heads have survived). On the one hand, these men remain within the compass of their groups (from the archaeological perspective — they continue to participate in their material culture), on the other hand, they have a closed world of their own where they utilize a separate set of objects. Relying on the ethnological knowledge of secret societies (Łapott 1987; Eliade 1997), it can be claimed that these men in a ritual way — in the dimension of *sacrum* — hence truly, are members of a secret society, while in everyday life — in the dimension of *profanum* — hence superficially, they participate in their groups (lineages). The death of any of them (departure to the other world) — ritual by its very nature — involved equipping the „translocating person" (i.e. the deceased) with ritual objects, i.e. related to his true existence (beaker, axe, knife and archer's kit).

Furthermore, it can be assumed that the mystery of secret societies was expressed not as an idea but rather by possessing „secret" objects. Some objects (e.g. beakers) in themselves were carriers of mystery. To possess them meant to possess or control mysterious powers which were hidden in them. Whereas the profane saw only one thing: those who have objects of power may use the power also against the uninitiated, thus they should beware of people possessing such objects. This could have been the mechanism of the growth of prestige of secret societies among other members of the group. The prestige was evinced in the taking over of judicial and political functions by the societies in a given group (Eliade 1997, 108). Another manner of expressing the mystery of those societies relied on the principle of participation. Participation in libations and other rituals was strictly restricted and highly attractive to all members of the group.

In the CWC, the differences between pottery used in settlement (everyday) contexts and in ritual ones (including funerary ones), observed already in the Funnel Beaker culture (Czebreszuk 2001, 258-259), became more pronounced. The latter were also subject to more rapid changes and were relatively easily transported from region to region. This readiness of transmission may have been, on the one hand, a result of the mobile way of life of some CWC societies (Machnik 1966; 1998; Kristiansen 1989), while, on the other hand, it reveals the cultural kinship of adult men (warriors-hunters) — members of secret societies from various CWC agglomerations. In the south-western Baltic zone, the SGC clearly commences a new stage in the complication of cultural contact forms. Next to the traditional channel — inherited from the Funnel Beaker culture (Fig. 4, Model A) — of maintaining ties between whole communities, a new form appeared binding individual secret societies which, in terms of population, remained a constituent part of a given community (Fig. 4, Models A and C).

A network was thus created which must have followed the traditional system of inter-group ties, i.e. ties between secret societies of individual groups. The mechanism of its building can be easily described using Renfrew's model of peer polity interaction. In the transition period between the Funnel Beaker culture and CWC in the south-western Baltic zone, communities formed a structure made up of many polities, i.e. specific groups. All of them were in the same stage of complication of social structures, which may be called the simplest variety of ranked societies. Among the societies inhabiting the great-valley portion of the area under consideration (basins of middle Elba, Oder and Vistula), the earliest to emerge were social changes ushering in a new type of culture (Kośko 1997). The mechanism of its origins, i.e. the origins of the CWC, still remains a mystery to us. Different hypotheses are put forth in this respect, such as migrationalist (Buchvaldek 1986a; Kristiansen 1989) or autochthonistic (e.g. Neustupný 1969), which oppose one another, or still others stressing the importance of both factors (Machnik 1979; 1998; Kośko 1992; 1997; Czebreszuk 1996). There is no doubt that, next to elements being a continuation of local traditions, as, for instance, pottery technology in Kujawy (Kośko 1992; 1997; Czebreszuk 1996, 85-86), we encounter important new developments. Apart from taxonomic traits, discussed extensively in the literature (Struve 1955; Buchvaldek 1986; Siemen (ed.) 1997), a single most significant novelty is individualization or the rise of the prestige of secret societies. The age group of adult men, which was evolving into a secret society, must have enjoyed enough prestige in the community

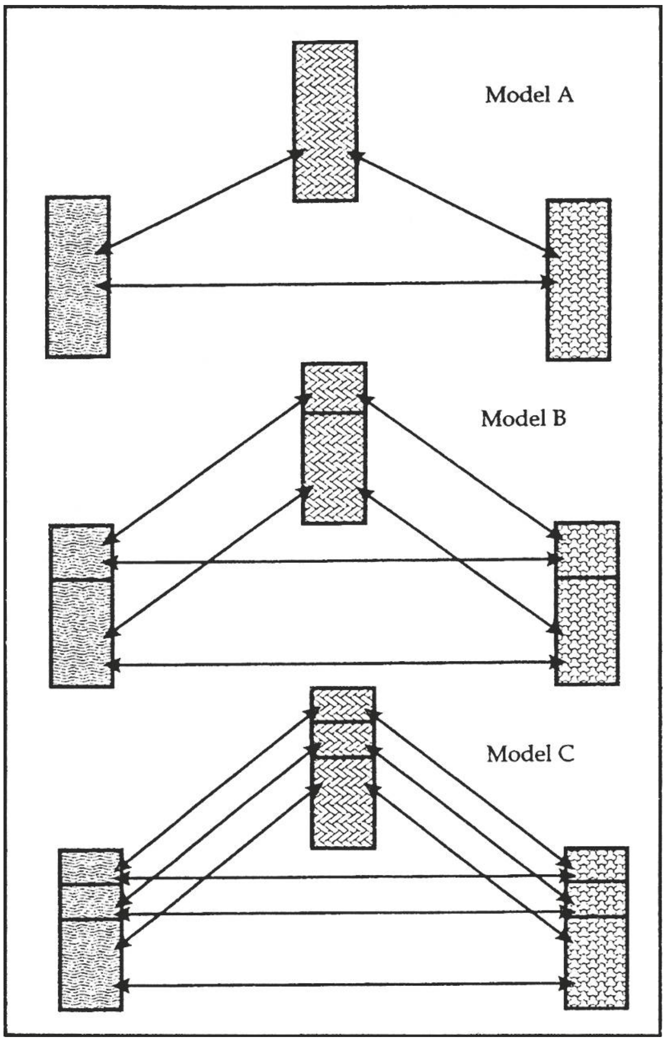


Fig. 4. A. Model of ritual superregional interaction between societies with one kind of material culture. B. Model of ritual superregional interaction between societies with two kinds of material culture. C. Model of ritual superregional interaction between societies with three kinds of material culture.

to be able to boost it as a society. This scenario was obviously „contagious”. In other groups, which in traditional (hitherto existing) cultural systems (i.e. Funnel Beaker culture) stayed in cultural contact, the observation of changes taking place in their neighbourhood triggered a similar process. Thus a network was formed which on the archaeological level can be called a cultural package, specifically the SGC package.

The set of objects making up the SGC package is rather stable. It consists of beakers, stone axes, an archer’s kit and — less frequently — a flint knife. The last two of the mentioned elements only partially survive in archaeological sources as series of arrowheads (archer’s kit) or flint flakes (knife).

It is highly characteristic that the structure of the package, understood as a set of objects fulfilling specific functions, remained unchanged, which testifies to the fact that the core meaning of the package continued in the same form.

Objects such as an axe, a bow with arrows and a flint knife relate to the basic types of activity of members of society, specifically to the role of warrior-hunter. It is this role that stabilises the meaning layer of the package. A different cultural meaning is attached to the beaker, usually elaborately decorated, which served the purpose of a prestigious and ritual drinking vessel (Burgess 1976; Sherratt 1987; 1991; 1995). It must have been (1) a personal property of the deceased (it is found as a rule only in graves), (2) used only in rituals, and (3) used to drink a beverage of special religious significance.

1. Beakers, like all the remaining objects of the SGC package, were under personal control of the deceased. Because of the fragility of material (clay), it must have been necessary for one person to make several beakers over time during his membership in the society. This practice led to the appearance of changes in beaker features, especially their ornamentation. The latter fact can be easily explained. The manufacture of beakers, being a secret of the society, must have been carried out in special ritual circumstances.

2. Ethnological reports show that time in primitive societies is divided into periods that can be called „regular” and „holy”. „Holy” is usually this season which is passive with respect to the main types of activity relating to subsistence. In our geographical zone it is winter time (Eliade 1997, 96). Apparently, it was also in this “holy” winter time that ceremonies were held on the Baltic coast in which beakers played a basic role.

3. The issue of the beverage drunk at such meetings is crucial. Here, we face two specific questions; first, what was actually drunk and, second, what was the symbolic meaning of the beverage? Archaeologists generally agree that the beverage drunk in ritual circumstances was intoxicating and seems to have been made on the basis of alcohol (Burgess 1976; Sherratt 1987; 1991; Czebreszuk 2001, 189-191).

However, the package witnessed incredibly dynamic changes of such traits as axe varieties or beaker ornamentation, which may be called secondary. What can this testify to? There are two possibilities. First it would be connected with competition between secret societies of particular groups. This was a new form of intergroup competition coinciding with the more traditional one consisting in mutual presentation of gifts (= assuming mutual, ritual obligations). In the SGC package, there is no evidence that it tended towards intergroup ranking (in the form of stable hierarchical systems between groups). The model of peer polities interaction describes best the type of society discussed here.

The second answer refers to identifying characteristics according to the „friend” (member of a given secret society) or „foe” (member of another secret society) rule. Patterns on SGC beakers certainly form a story of ups and downs of both particular secret societies and their individual members. Traditional archaeology carefully discerned the syntax of this phenomenon by analyzing typological sequences of patterns on CWC beakers (Glob 1945; Struve 1955; Jacobs 1991; Czebreszuk 1996). Nonetheless, we are still at the outset with respect to the reconstruction of their meanings (Hodder 1982).

A different course was taken by the transformations of the „corded” beaker. Here we deal with a clear discontinuity when — quite abruptly — following a variety of s-profile beaker, an entirely new shape appeared, namely a straight-wall beaker (flowerpot beaker – Fig. 5:A). This development poses two important questions. The first concerns the origins of the flowerpot form, the second its significance for the meaning of the package.

In a broader spatial range covering the Mediterranean and Europe, it is feasible to look for the causes of the rapid ritual rise of simply built clay vessels, which flowerpot beakers are, by turning to the hypothesis that they are an emulation of the idea of the simplest metal vessels. Metal vessels, in principle, served only cult purposes. The straight-wall form of a metal drinking vessel (made of gold, silver, electrum

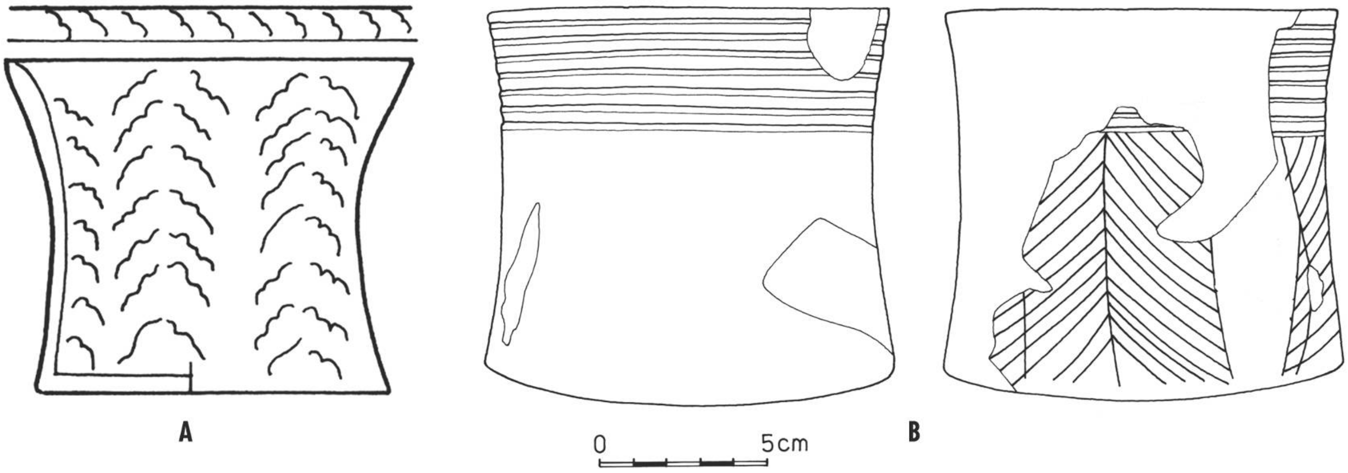


Fig 5. Flower-pot-like vessels from (A) Jutland (Hvass 1986) and from (B) Portugal (settlement in Zambujal; Kunst 1995, Taf. 13: b,c).

or bronze) is attested among the oldest finds in the whole of Middle East and Europe (cf. recently: Zich 1997).

The origins of straight-wall beakers should be considered in the context of ties between central Europe and the western Mediterranean, or more precisely, the Iberian Peninsula. In the light of the research of M. Kunst (Kunst 1995), this form occurs in the last pre-beaker horizon of finds (Fig. 5:B). This western trace is interesting in as much as it draws our attention to the relationship between the SGC and Bell Beakers (BB). Looking for an answer to the first of the posed questions one should also notice a coincidence between the appearance of the form and the beginnings of BB impact in the Baltic zone (Czebreszuk 2001). Both developments took place in the early second half of the 3rd millennium BC. Hence, there seems to be a relationship between the origins of the flower-pot form in the SGC and the beginnings of BB impact in the same area. However, in the present state of our knowledge it is difficult to be more specific.

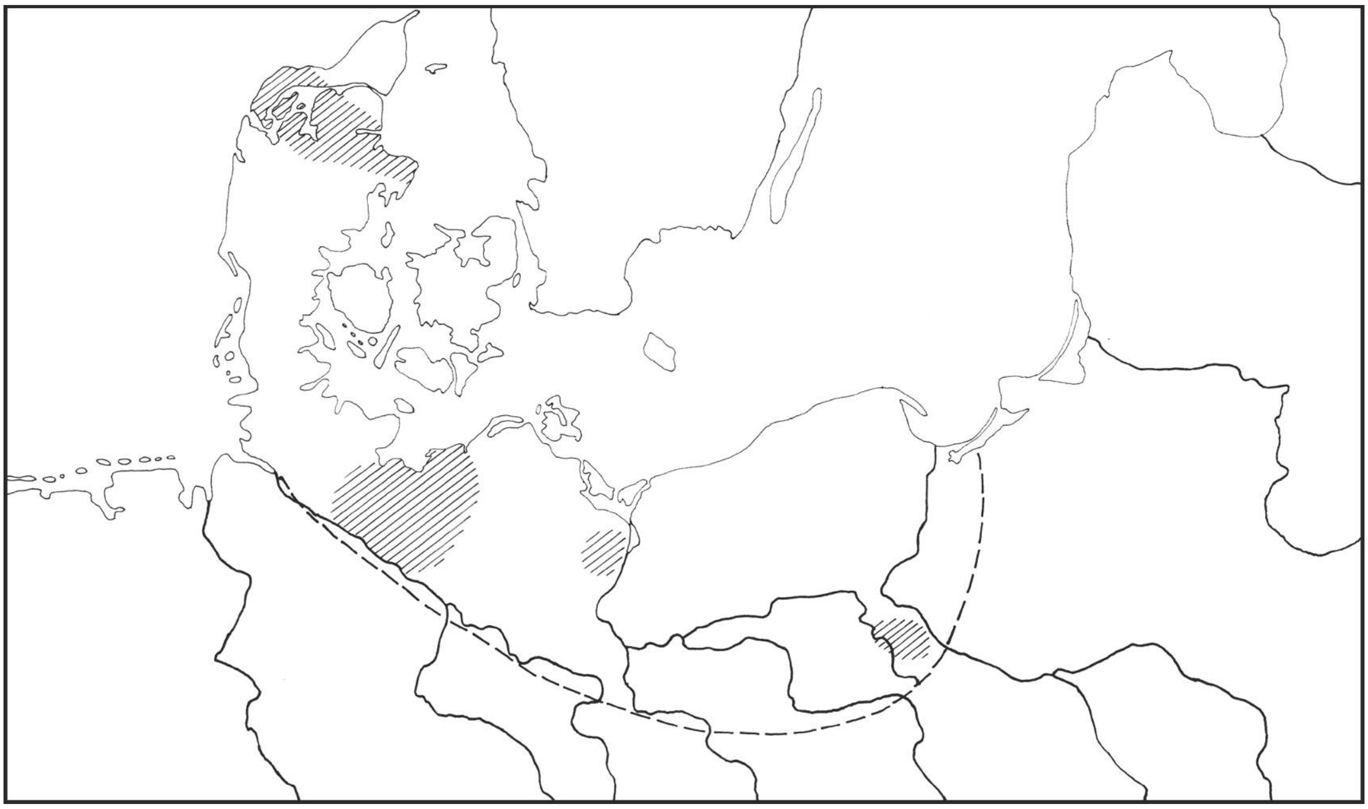


Fig. 6. Major concentrations of Bell Beakers traits in the south-western Baltic zone (Czebreszuk 2001, Fig. 6).

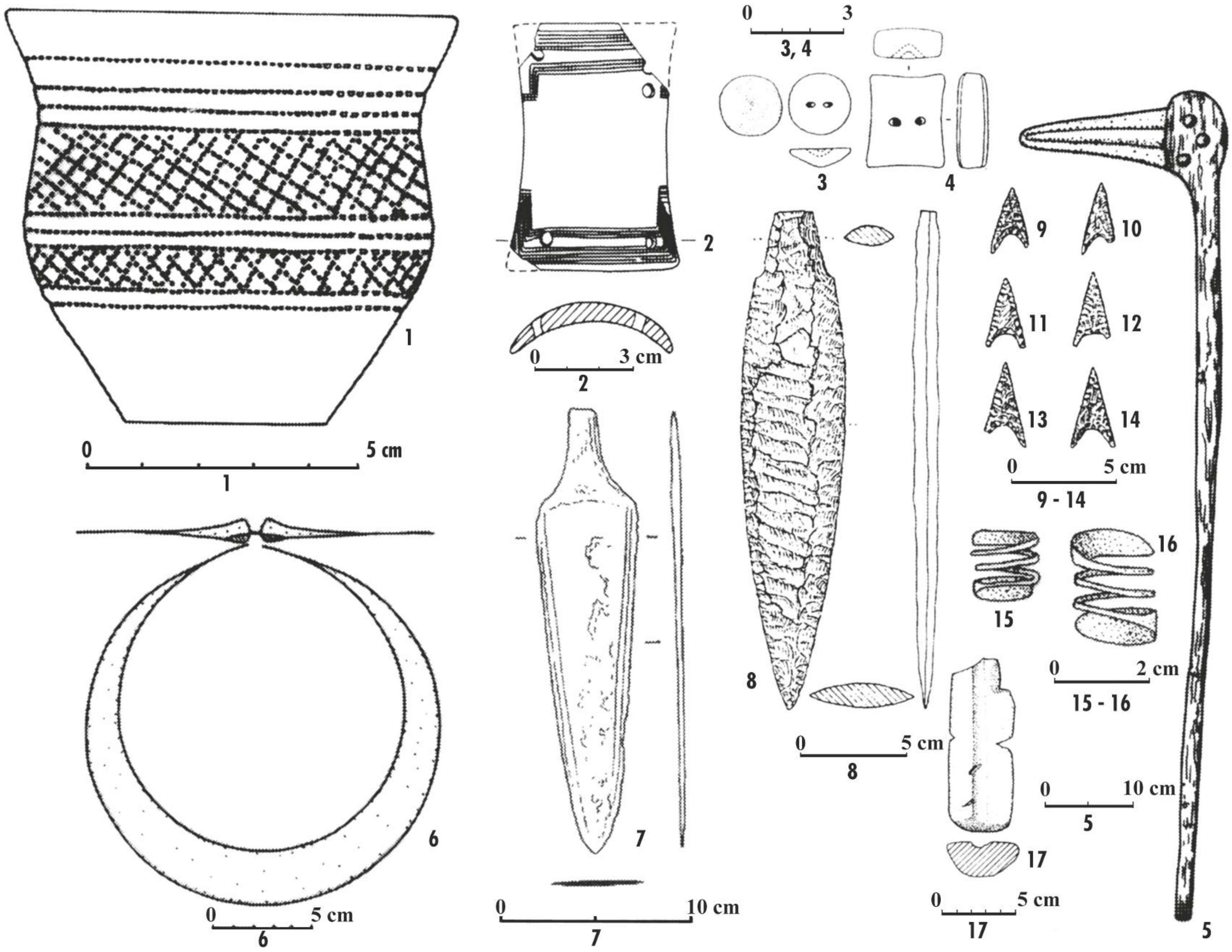


Fig. 7. Bell Beakers package. 1 – beaker (Bobzin, North Germany, Archives of R. Schroeder); 2 – archers's wristguard (Pasewalk, North Germany, Jacobs 1991, Taf. 64: 13); 3 – v-perforated button (Montagnac-Montpezat, grotte Murée, France, du Gardin 1991, Fig. 1: 19); 4 – v-perforated button (Vaasen, Holland, du Gardin 1998, Fig. 1: 30); 5 – halbard (Carn, Irland, Harbison 1969); 6 – *lunula* (Grevinge, Denmark, Vandkilde 1996, Fig. 174); 7 – tanged copper dagger (Roundway, Great Britain, Case 2001, Fig. 1: 14); 8 – flint dagger; 9-14 – arrowheads (both: Borbierg, Jutland, Vandkilde 2001, Fig. 6); 15,16 – small gold ornaments with oar-shaped ends (Grove, Denmark, Vandkilde 1996, Fig. 174); 17 – stone beltfastener (Lanz, North Germany, Wetzel 1976, Fig. 2: 12).

III. Bell Beaker package

The BB (Fig. 6) introduced ranking to secret societies by their very appearance on the Baltic, so to speak. By no means did their appearance terminate the existence of the previous package — the SGC. Due to the fact that the BB package was richer and more complex than the SGC package, it seems that the former occupied a superior position on the social scale as well. Thus it is also this dimension of their relationships that adds to the complexity of the then social structures, which shall be discussed now.

The set of objects making up the beaker package is by far the largest in comparison to other similar phenomena in the south-western Baltic zone. For the sake of reminding, it comprised (Fig. 7) bell beakers, flint daggers to be later supplemented by copper ones, an archer's kit frequently including wristguards, amber goods including V-perforated buttons and gold objects (in particular *lunulae* and earrings).

A change in the package's composition, in comparison to that of the SGC, reflects a change in its meaning. Especially its wealth and the presence of goods made of non-native (exotic) materials point to a broader geographic and cultural context of the BB package. In diverse forms it spreads over vast expanses of Europe, predominantly its southern and western parts (Strahm (Hrsg.) 1995). It is rather improbable that in so geographically large an oecumene, BB traits played everywhere the same social and cultural role (Nicolis (ed.) 2001). However, it seems to be possible to distinguish within it some sub-zones in which

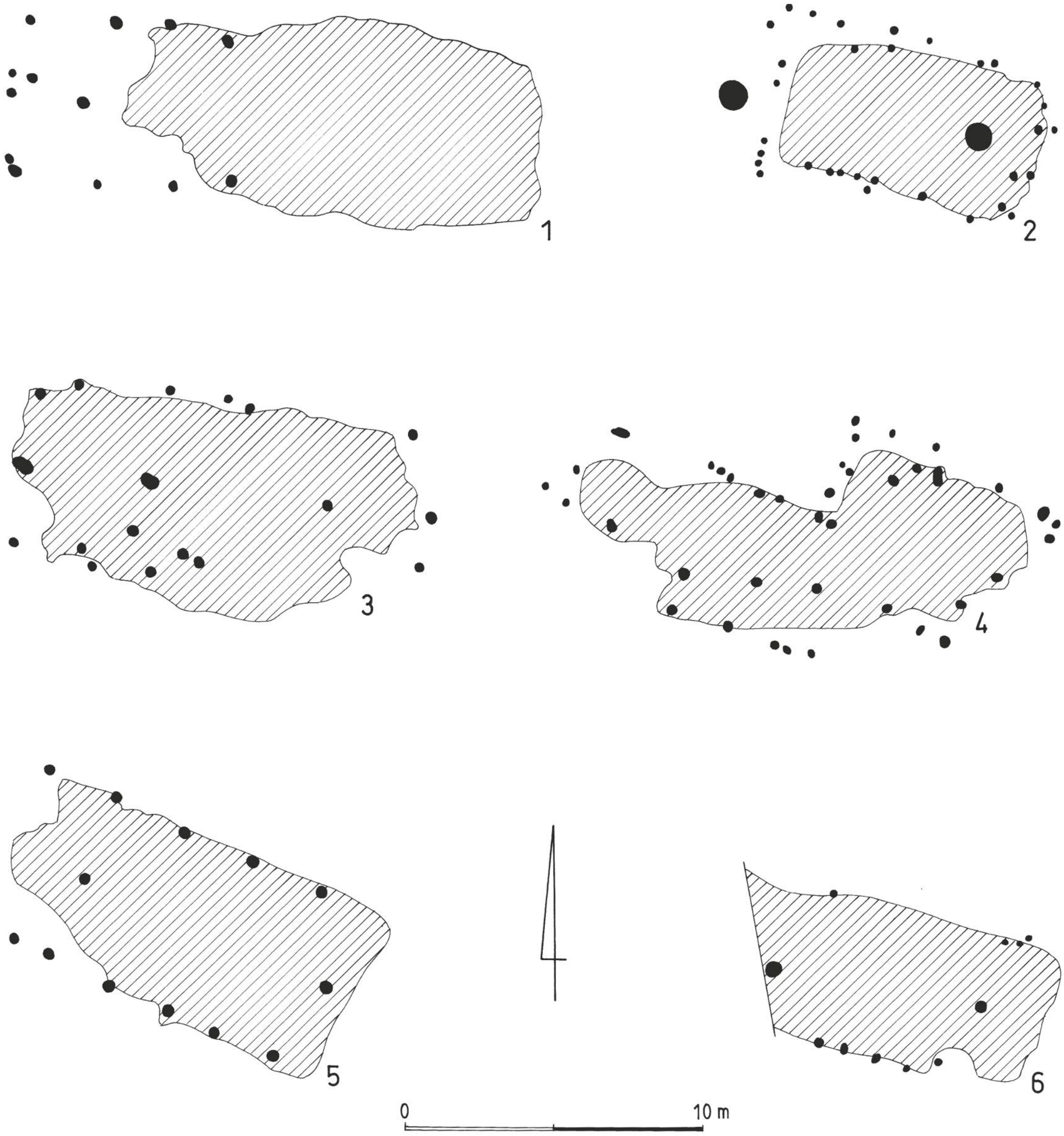


Fig. 8 Houses related to Bell Beakers in the region of Limfjord, Denmark. Shaded areas indicate parts of houses with sunk floor (Simonsen 1983).

BB fulfilled convergent, although certainly not uniform, functions in society (Harrison 1980, Fig. 2). One of such sub-zones stretched along the south-western shores of the Baltic and was named the north European BB province (Czebreszuk 1996, 250; 2001; Czebreszuk / Szmyt, The Northeastern..., in this volume).

Taking, however, a global look at the whole BB phenomenon, there cannot be any doubt that communities from over a half of Europe „stayed in contact" although the meaning of this contact to a large extent remains not clear. In this context, it becomes obvious that in the period of prehistory referred to here, the question of ties between the southern shores of the Baltic and the Mediterranean takes on a new dimension. What is special about these ties is the route they took. Instead of taking the geographically shortest Balkan route, they followed an alternative one via Iberia, the British Isles and the western European Plain (Czebreszuk 2001, 134-142). At the first glance this route is much longer but only in terms of geographic

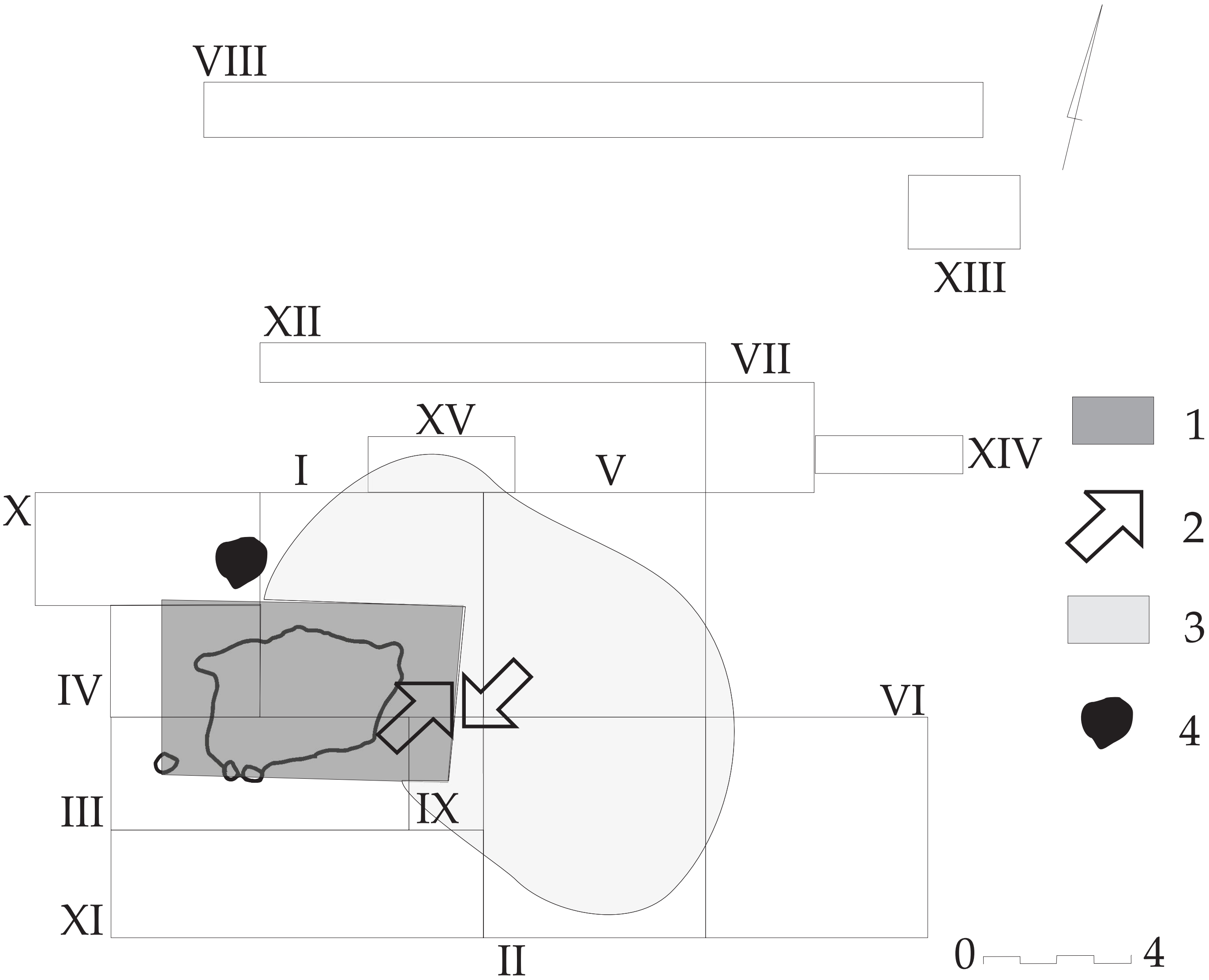


Fig. 9. Smarglin, Kujawy. Reconstruction of settlement structure. 1 – dwelling structure; 2 – entrance; 3 – yard; 4 – storage pit (Czebreszuk / Przybył 2002, Fig. 46).

distance. In cultural terms, it turned out to be much shorter than the Balkan one. Presence of formal similarities between the region of Europe discussed here and the Iberian zone (Czebreszuk 2001, 102-105) shows that these ties revealed themselves through the beaker package and related ideas. The relations were apparently not direct but were established through the intermediacy of the Lower Rhine group of the BB.

One of the major effects of the said ties is the appearance of metal goods in clearly greater amounts than in previous periods (Vandkilde 1996). It is worth mentioning here that the Iberian Peninsula was one of the main locations of prehistoric Europe where deposits of copper and gold were mined (Harrison 1974; Gomes Lisboa 1995). It is widely believed, moreover, that relatively quickly the manufacture of metal objects was carried out locally, in the south-western Baltic zone (Vandkilde 1996). Thus, the first stage of introducing communities living there to the mystery of metal was completed.

The most characteristic aspect of the oldest forms of metallurgy is the fact that it was not a metallurgy of copper alone but of copper and gold from which such objects as *lunulae* and the so-called ear-rings were made (Vandkilde 1996). On the scale of cultural value gold reached then the highest mark of all metals, which can be deduced from the set of object made of it. These facts show how strongly marked, among the studied communities (related to the BB package), the need of prestige was.

Living in the vast BB oecumene, the population of the Baltic zone stood out against populations of other zones because of such qualities as a higher incidence of BB traits in settlement contexts, a more marked presence of amber and — the most conspicuous — a wealth of flint daggers.

The north European BB province stands out from other „beaker" agglomerations due to the number of settlement remains, in many cases with houses remains (Fig. 8). These are settlements (Fig. 9) founded on light, sandy, dune-like elevations (e.g. in Jutland – Jensen 1973; in Mecklenburg – Wetzel 1969a; 1976a; Jacobs 1991, 57; in Kujawy – Czebreszuk / Szmyt 1992, 130-153; Przybytek 1996; Czebreszuk / Przybył 2002).

In the whole south Baltic zone, amber was a traditional raw material whose use was essentially restricted to the cult and religious spheres. Until the second half of the 3rd millennium BC, it remained a regional raw material as its use was restricted to the region of Europe outlined above (Czebreszuk 2003). Only in the BB era do we observe first symptoms of change — amber became a material known throughout Europe (Beck / Bouzek (eds.) 1993) and the Mediterranean world by entering into the beaker network of long distance ties (du Gardin 1998; Czebreszuk 2003). This is evidenced by the distribution of so characteristic an amber product as V-perforated buttons (Czebreszuk / Makarowicz 1993; Czebreszuk 2003).

Flint daggers were also made of local material, specifically, top quality flint quarried in northern Jutland and on the Danish Isles (Lomborg 1973). The concept of dagger had been rather alien to this part of Europe and reached it only together with the BB in the form of blades of *Grand Pressigny* type. Their local „ancestors" were, possibly, flint knives known in the SGC. Their remains, in the form of long chips or flakes, are found in graves.

The appearance of the BB package among Baltic communities evinced fundamental social changes consisting in apparent complications of this aspect of life. The first area of complication was the fact of long co-existence of both packages — the SGC and BB. The two packages could have co-existed, according to maximum estimates, throughout the second half of the 3rd millennium BC (Fig. 2) developing a completely new domain of competition and an area for ranking, including intergroup one, to grow in. Here a number of questions arise. Which groups or secret societies and why subsisted in the „corded" package? Which groups and secret societies „moved" to the „beaker" package? Why did those and not others find their way to this package? What was revealed, within this opposition, by the more grave character of the SGC package and a more settlement character in the case of the BB? To many of these questions we cannot find any answers today.

What we do know, however, is that the BB package revealed more conspicuously a need to obtain gifts (products) made of exotic (luxurious) materials. Special dynamics and a cultural tension are added to the whole situation by the fact that it was the BB package that witnessed a further and incredible flourishing of pottery. In terms of technological accuracy, formal diversity and wealth of ornamentation it was then going through its apogee. This must have been reflected in its cultural weight in the societies under investigation. Hence, we deal in the BB with two simultaneous processes. On the one hand, we observe a continuation of a high cultural rank of pottery, on the other, we record the beginnings of a search for exotic materials. The latter development was of great importance for social tendencies in the groups existing with the BB package. Ranking had reached among them so complex a stage that the choice of means of expression offered by local raw materials — despite a great thriving of pottery-making — became too narrow. As a result such structures took root among them which found expression in the material culture as products made of exotic materials.

A peculiar kind of an exotic material for the then societies must have been metal, in particular gold. It was „exotic" because no deposits of gold were known in the studied part of Europe then. It was also „exotic" because of a specific method of production, namely melting. Together with it came into being an entirely new sphere of reality — metallurgy — whose character was less productional but rather concerned with the world-view.

Under the influence of the processes outlined above, the phenomenon of directing the inadequate exchange of gifts took place. I refer here to F. Braudel's distinctions (Braudel 1992, 36), who considered the phenomenon of inadequate exchange of gifts a constant element of the circulation of goods. In the period of prehistory of interest to us here, among Baltic communities, a more significant phenomenon took place, namely, a constant directing of the said inadequacy (Czebreszuk 2001, 32). Thus, a process of original accumulation was begun taking the form of both original accumulation of objects (prestige ones, symbols of status and authority) and original accumulation of power (the rise of structures within societies that took authority on themselves, in which process a considerable role was played by secret societies). In fact, both of them are two sides of the same coin.

Next, the process of original accumulation of power accelerated leading to the first, more stable social stratifications within groups and the rise of subordination relationships between them.

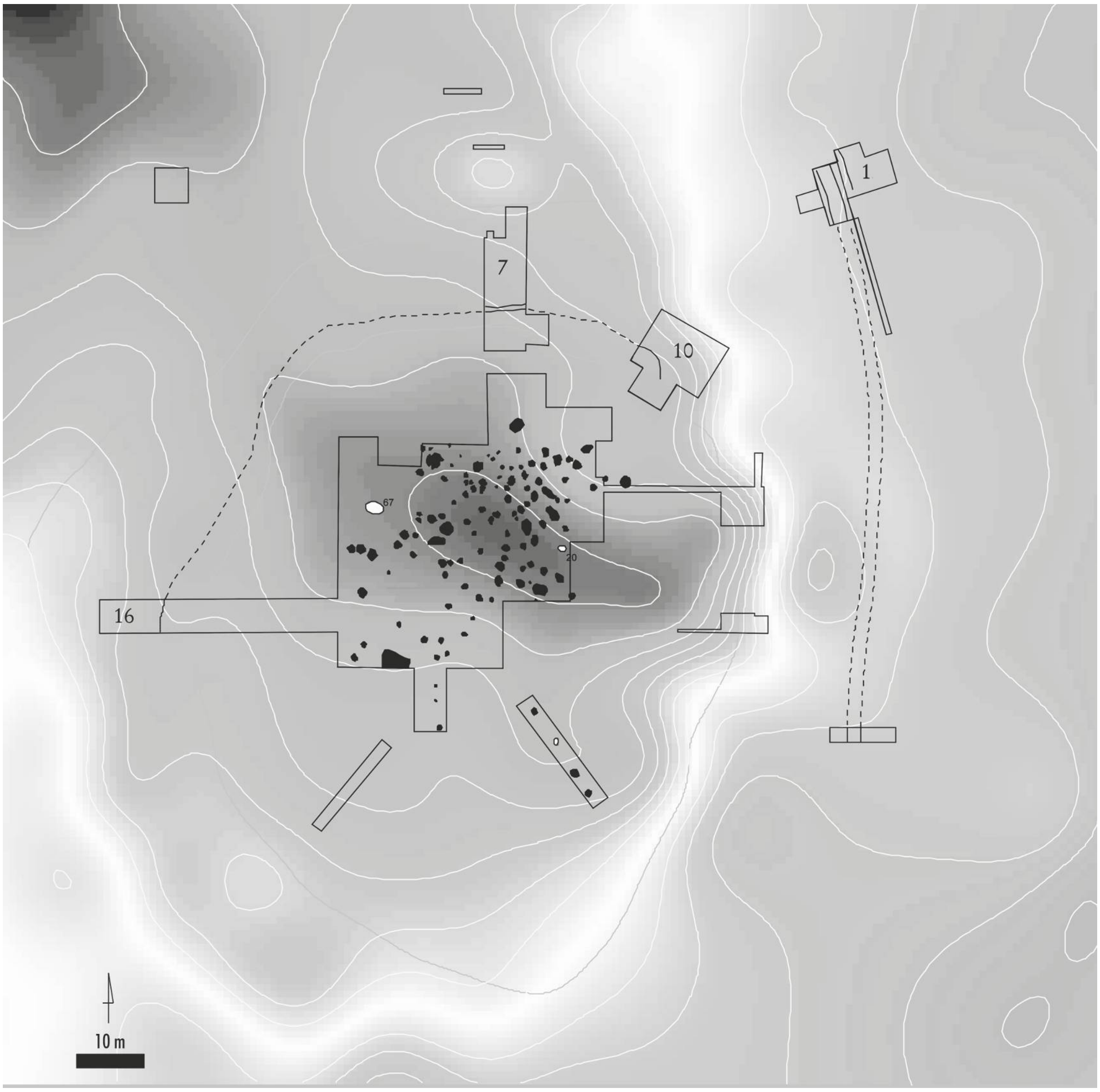


Fig. 10. Bruszczewo, Great Poland, fortified settlement (Müller / Czebreszuk 2002). In the middle, on the top of the hill – settlement structures. On the North, Northwest and East – fortification.

IV. The Bruszczewo-Łęki Małe structures

A sign of breaking with the hitherto followed course of development is the emergence of first, relatively stable territorial communities with stratified social structures resembling those of proto-states at least in some areas (Wielkopolska) during the stage of Únětice influences. I shall use here the example of the defensive settlement in Bruszczewo (Fig. 10; Czebreszuk / Müller (eds.) 2003) and the complex of tumulus burials in Łęki Małe (Fig. 11 and 12; Czebreszuk 2001, 84-88). The data concerning the chronology of the settlement indicate that its beginnings — the construction of a defensive structure in a virgin area — date back to the early 2nd millennium BC (Czebreszuk / Kadrow / Müller 2003). The defensive structure was used also later — possibly continuously — until 1600-1500 BC, which means that it was inhabited for at least 400 years. At Łęki Małe four tumuli containing rich burials were excavated. The deceased had been supplied with assemblages of objects displaying clear prestige-insignia connotations. The dead must have, therefore, belonged to the ruling stratum. The fact that, apart from the excavated ones, there are other

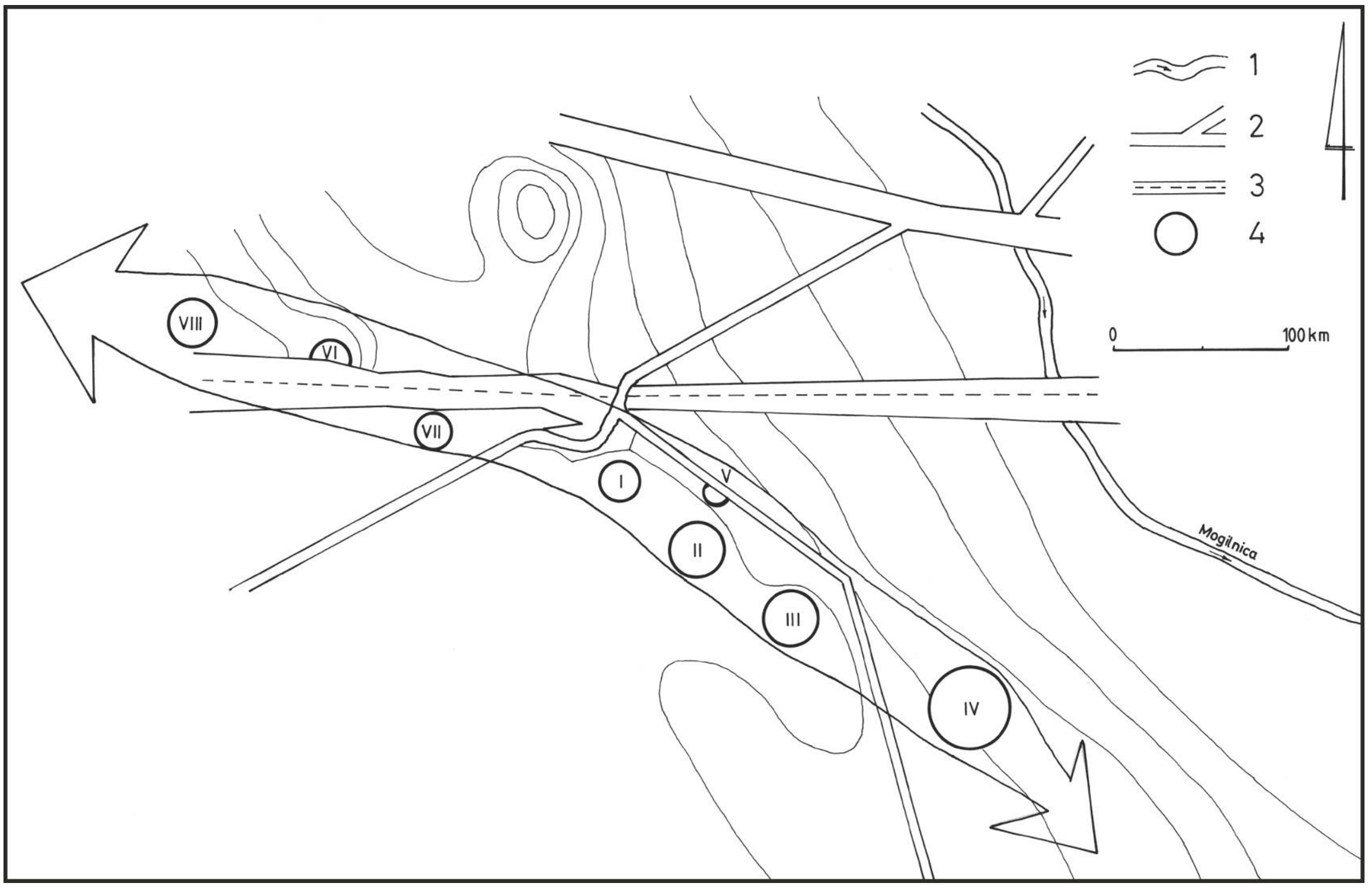


Fig. 11. Łęki Małe, Great Poland. Únětice culture barrow cemetery. 1 – Mogilnica River, 2 – roads, 3 – railway line, 4 – barrows (Kowiańska-Piaszykowa / Kurnatowski 1954, supplemented).

tumuli at Łęki Małe with partially destroyed mounds, points to the virtually dynastic character of the cemetery used over a long period of time (as long as Bruszczewo?). The hypothetical proto-state structure whose rulers could have lived in Bruszczewo and been buried at Łęki Małe took shape at the turn of the 3rd millennium BC and continued in existence until the end of the first half of the 2nd millennium BC.

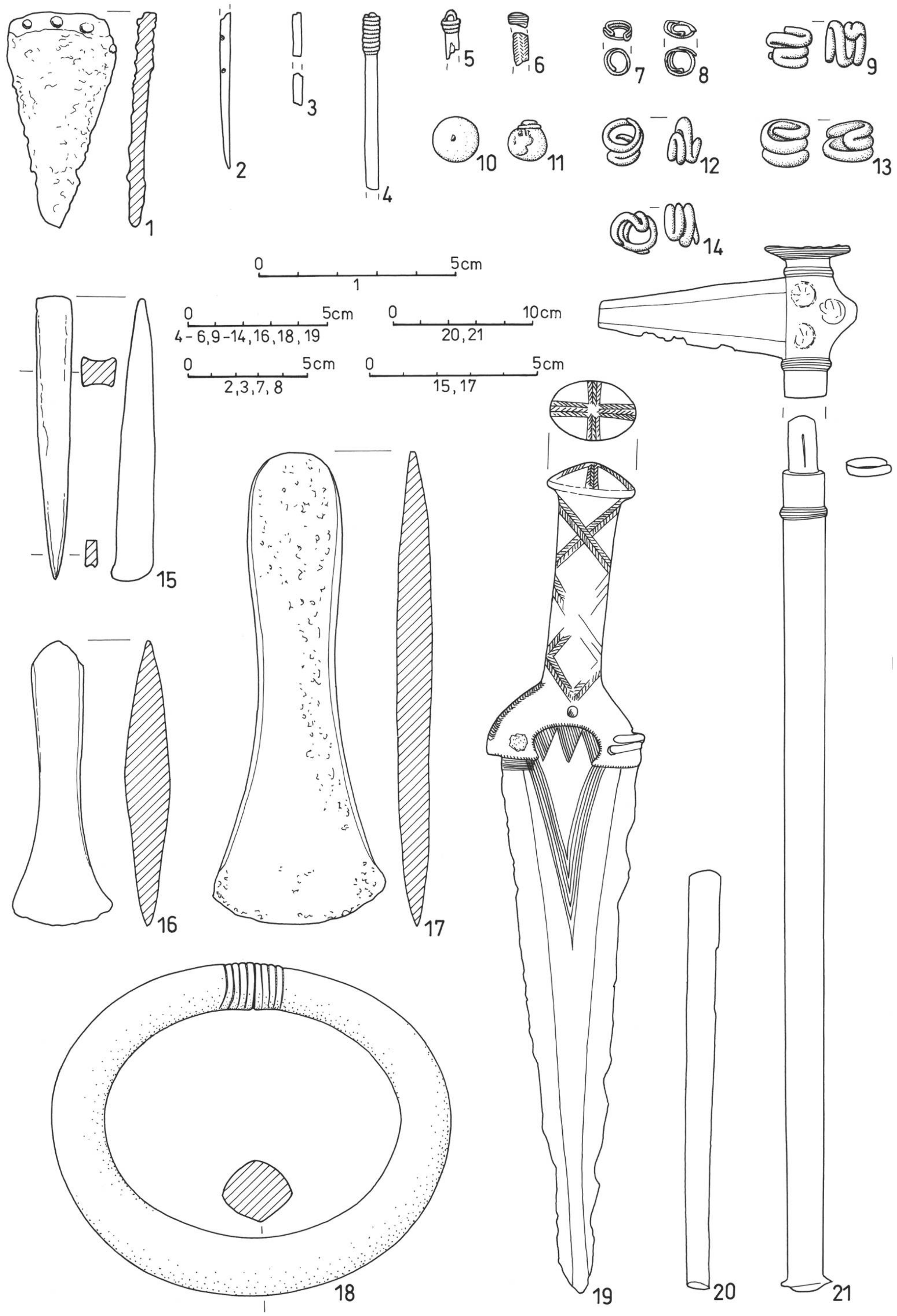
The emergence of structures of the Bruszczewo-Łęki Małe type in Wielkopolska is in many respects a cultural watershed.

It is then that the principle of territorialism was introduced which, unlike the kinship ties prevailing earlier, brought about a new type of community not based on blood ties, subject to various degrees of mythologization, but rather on common inhabiting of a territory.

The development of a stable social stratification with a hereditary ruling stratum took place. In this context it is necessary to draw the reader's attention to the peculiar logic of social development on the south-west Baltic. Beginning with various kinds of ranked societies, namely the simplest based on age groups, more complex ones relying on secret societies and „original accumulation of power" ending with social stratifications of the status strata type, a single process of piling changes continued all the time whereby next states were developments of previous ones.

In addition, in the societies of the Bruszczewo-Łęki Małe type a need to possess various exotic and luxurious goods became more pronounced. Exotic materials and products became a means of expression of claims of the newly formed ruling stratum. Gold, copper and amber were holy materials possessing as such extraordinary powers. Daggers, tanged daggers, ornamented beakers, *lunulae* were insignia and weapons serving as signs of sharing the highest prestige. The very fact of possessing such objects was a sufficient manifestation of power vested in those who held them. These objects, therefore, laid foundations first for strangeness, then for separateness and finally for social superiority of some members of a group over others.

In the period of prehistory discussed here, when — from the perspective of social changes — groups displaying the characteristics of both ranking and stratifi-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0 10cm
20,21
0 5cm
2,3,7,8
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15,17
15
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17
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Fig. 12. Łęki Małe, Great Poland. Únětice culture barrow cemetery. Selection of grave goods. 1,4,14,16,18,20,21 - barrow I grave A, 5,6,9-13,15,17,19 - barrow I grave D, 2,3,7,8 - barrow III grave B (Kowiańska-Piaszykowa / Kurnatowski 1954; Kowiańska-Piaszykowa 1957). 1-6, 15-19, 21 – bronze, 7-9, 12-13 – gold, 10,11 – amber, 20 – wood.

cation were developing, one can speak of the growing importance of war relationships as one of the major forms of intergroup relations. War was institutionalised then as this is a necessary condition in the case of the emergence of any proto-statehood structures. Such structures necessitate organisation of a „ruler's squad" having both internal (coercion to submission) and external (conflicts with neighbouring proto-statehood structures) functions. This is what happened in territorial proto-statehood organisms, like the one in Wielkopolska, but surely not only there. Also other societies inhabiting the south-western Baltic zone could potentially institutionalise war, in particular those that lived in Jutland (VANDKILDE 1996, 259-308).

There is a certain body of data that may be useful in the investigation of the above issues. What is meant here is the structure of weaponry (FOGEL 1979; 1981). In the part of Europe studied here, we deal with a meaningful opposition. It consists in the fact that the weaponry structure of the dagger+axe type was superseded from the north by another one comprising a sword+spearhead. What is highly significant in this connection is the fact that the oldest finds of swords and spearheads discovered in hoards (BLAJER 1990, 36-39) come solely from Pomorze. In the case of the latter structure there is a hypothesis claiming that it reveals deeper conditioning related to the battle order and composition of units. Supposedly a sword was wielded by the commander (chief) while warriors used spearheads (cf. an example from the Early Iron Age: RANDSBORG 1995, 38-42). By analogy, it can be claimed that in the case of the dagger+axe type, daggers were used by chiefs while axes by warriors.

Still another effect of such processes as the rise of territorial communities, internal and intergroup stratification as well as the social importance of war relationships must have been a change in the approach to time. The change could take place only in the emerging ruling class (ancestors of our aristocracy) and involved a switch from a repetitive to linear concept of time (I. Hodder places this change still earlier, namely during the development of the SGC, see HODDER 1990, 216). At that moment of our history conditions conducive to chivalry and heroic epic developed. It was the very need of genealogy and the charm of boasting long lineages of ancestors, preferably reaching back to some god or hero that required a linear concept of time. It is enough to remember how much space Homer devoted in the *Iliad* to the genealogy of each character.

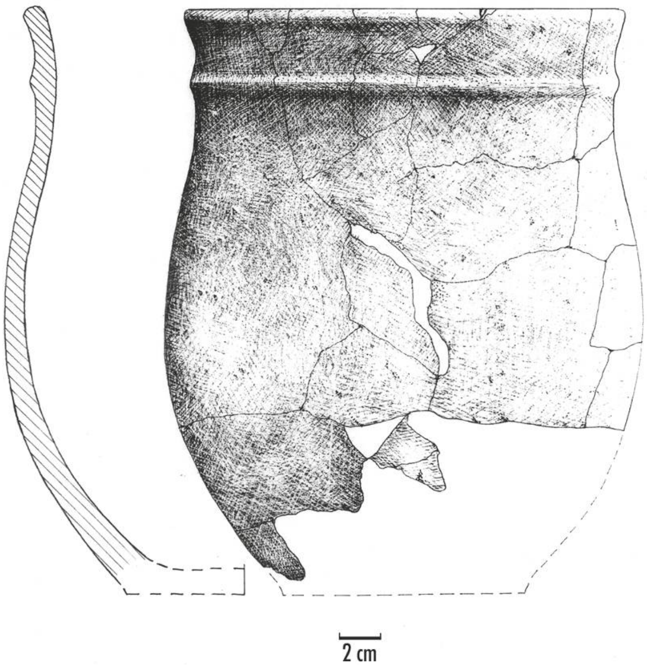

Fig. 13. Dęby, Kujawy. Trzciniec pot.

V. Riesenbecher-Trzciniec package

However, these phenomena had an „insular" character. The „islands", namely Jutland and Wielkopolska (possibly Kujawy, too, which may be indicated by the accumulation there of prestige objects – CZEBRESZUK 1997) were surrounded on all sides by societies among which the last package, i.e. R-T, began to spread (CZEBRESZUK 1998). The world grounded in the opposition between the first proto-state structures, on the one hand, and societies covered by the R-T package, on the other, can be adequately described using the centre-peripheries model. One side of this opposition — the centre — I have already outlined. Now, I shall present the other side: the periphery or the R-T package. It comprised a single vessel form — a large S-profiled pot, with little ornamentation or frequently with none (Fig. 13). The material meagreness of the package is reflected in the simplification of its meaning while both these characteristics indicate the decline of a specific type of society. This is especially clearly seen in the wealth of pottery included in the package. In the Danish and Vistula zones sequences of changes in pottery style in settlements have been reconstructed illustrating a gradual simplification of ornamentation (LIVERSAGE 1987). In both zones, the BB close the stage, lasting from the beginning of the Neolithic, of the prevailing custom of rich and diversified ornamentation of pottery. In sum, at the end of the BB period, pottery ceased to fulfill the identifying function of cultural tradition in the studied part of Europe. Its forms became simple and technology primitive (Rasmussen 1993). The process is visible in the whole zone from Jutland to Kujawy, while on the taxonomic plane it is manifested by the barbed wire ornamentation and, in the first place, by the R-T package. Hence, a hypothesis can be put forward that after the BB period the function of identifying cultural tradition was taken over by other traits of material culture than pottery, most probably metals, which has already been stressed by H. Vandkilde (Vandkilde 1996). The change, however, did not occur within the R-T package, but next to it. New groups came into being such as a developed Únětice culture, the Nordic Bronze Age or the Lusatian culture.

Another manifestation of the declining nature of the R-T package is its low cultural competitiveness with respect to other phenomena. This is easily seen in the development length of the package in individual regions. In all places where new cultural alternatives, such as the Únětice culture, the Nordic Bronze Age or the Lusatian culture, appeared relatively early, namely in the west and in the drainages of the Oder and lower Vistula, the package is an early phenomenon and a relatively short one (Fig. 14). A different situation is observed east of the middle Vistula where the R-T package lasted long without any major modifications (e.g. Dąbrowski 1997, 91-92; Krywalcewicz 1997, 91).

To summarise, the R-T package is contemporaneous with such cultural processes as the rise of territorialisation of societies observed in Wielkopolska and the beginnings of the Nordic Bronze Age or the Lusatian culture. All of them, together with the meagreness of the package evince the decline of the specific type of society that continued in existence on the south-west Baltic until the early centuries of the 2nd millennium BC.

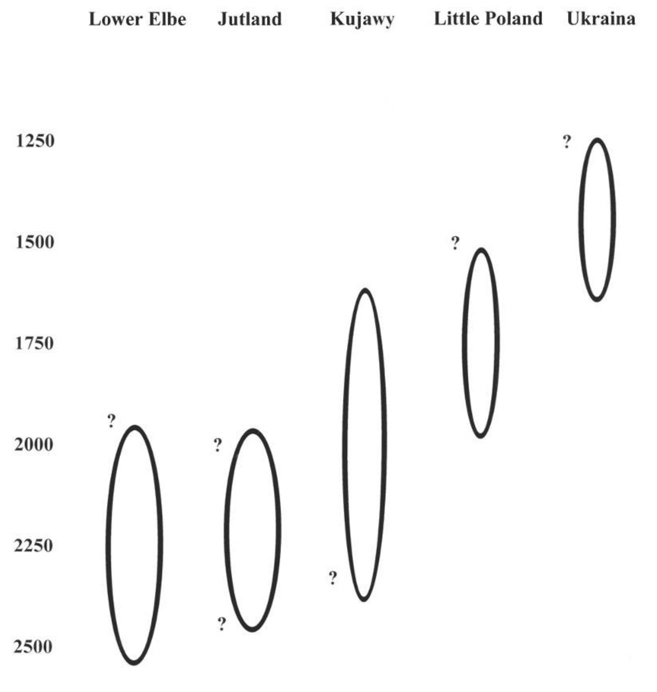

Fig. 14. Dating of the *Riesenbecher*-Trzciniec package in selected regions of Central Europe (Czebreszuk 2001, Fig. 44).

Conclusion

The society was archaeologically characterised by a number of cultural packages — clearly separate sets of objects usually found in specific contexts and distinct from a variety of other products used by a given group. As regards the internal organisation of such groups, an important position was occupied by secret societies and age groups (especially those comprising adult men/hunters/warriors), whereas as regards the social structure, ranking was dominant. It was, however, a type of ranking that was open to change in the direction of a stable social stratification. This type of culture, referring to the proposal of A. Bokiniec (Bokiniec 1999, 80), can be called polymorphous in clear opposition to the classical conceptions of „archaeological culture". A polymorphous culture can be briefly defined as having the following characteristics:

1. In societies with a polymorphous culture the basic role in defining the identity of individuals or groups of people is played by material culture.

2. Societies with a polymorphous culture, from the taxonomic point of view, have several groups in which traits co-occur.

3. Individual groups where traits co-occur are a manifestation of separate subgroups or institutions within the society.

During the first half of the 2nd millennium BC, the symptoms of disintegration of the existing supra-regional structure of cultural information flow intensified. The first symptom, which may be called internal, of the loss of cultural dynamism by the polymorphous society was the appearance of the last package, i.e. the R-T. It was noticeably more meagre. The second (external) symptom was the rise of new cultural structures within the oecumene of polymorphous culture societies. Within the south-western Baltic area two such units came into being: Nordic Bronze Age and Lusatian culture.

Acknowledgments

The study has been financed by the Polish Committee of Scientific Research (proj. no. 1 H 01H 019 17).

References

Beck C.W. / Bouzek J. (eds.), 1993. *Amber in Archaeology. Proceedings of the Second International Conference on Amber in Archaeology* Liblice 1990. Praha.

Blajer W. 1990. *Skarby z wczesnej epoki brązu na ziemiach polskich*. Wrocław.

Bokiniec A.Z. 1999. Ukryty czynnik. Esej etno-archeologiczny. In: *Szkice prahistoryczne. Źródła – metody – interpretacje*, 65–85. Toruń.

Braudel F. 1992. *Kultura materialna, gospodarka i kapitalizm XV-XVIII wiek. Czas świata. Warszawa.*

Buchvaldek M. 1986. Zum gemeineuropäischen Horyzont der Schnurkeramik. *Praehistorische Zeitschrift* 61/2, 130–151.

Burgess C. 1976. The Beaker Phenomenon: Some Suggestions, Part I: General Comments and the British Evidence. In: *Settlement and Economy in the Third and Second Millennium B.C.* British Archaeological Report 33, 306–323. Oxford.

Case H. 2001. The Beaker Culture in Britain and Ireland: Groups, European Contacts and Chronology. In: F. Nicolis (ed.), *Bell Beakers Today. Pottery, people, culture, symbols in prehistoric Europe*, 361–377. Trento.

Czebreszuk J. 1996. *Społeczności Kujaw w początkach epoki brązu*. Poznań.

Czebreszuk J. 1997. Krąg mogiłowy i popielnicowy na Kujawach. Przyczynek do badań nad regionalną zmianą kulturową. In: W. Blajer (ed.), *Beiträge zur Deutung der bronzezeitlichen Hort- und Grabfunde in Mitteleuropa*, 91–107. Kraków.

Czebreszuk J. 1998. “Trzciniec”. An alternative view. In: *The Trzciniec Area of the Early Bronze Age Civilization: 1950-1200 BC.* Baltic-Pontic Studies 6, 165–189. Poznań.

Czebreszuk J. 2001. *Schyłek neolitu i początki epoki brązu w strefie południowo-zachodniobałtyckiej (III i początki II tys. przed Chr.). Alternatywny model kultury*. Poznań.

Czebreszuk J. 2003. Amber on the Threshold of a World Career. In: C.W. Beck / I. Loze (eds.), *Amber in Archaeology*, 164–179. Riga.

Czebreszuk J. / Makarowicz P. 1993. The Problem of Amber Buttons with V-shaped Perforation in the Bell Beaker Culture. In: *Actes du XIIe Congres International des Sciences Prehistoriques et Protohistorigues, Bratislava*, t. II, 529–532. Bratislava.

Czebreszuk J. / Müller J. (eds.) 2003. *Bruszczewo, Grosspolen. Ein befestigte Siedlung aus Frühbronzezeit. Bruszczewo, Wielkopolska. Osada obronna z wczesnej epoki brązu.* Poznań-Bamberg, in print.

Czebreszuk J./ Przybył A. 2002. *Osadnictwo neolityczne i protobrązowe w Smarglinie, woj. kujawsko-pomorskie, stanowisko 22.* Poznań.

Dąbrowski J. 1997. *Epoka brązu w północno-wschodniej Polsce.* Białystok.

Eliade M. 1997. *Inicjacja, obrzędy, stowarzyszenia tajemne*. Kraków.

Fogel J. 1979. *Studia nad uzbrojeniem ludności kultury łużyckiej w dorzeczu Odry i Wisły*. Poznań.

Fogel J. 1981. *Broń ochronna i okazjonalna ludności kultury łużyckiej w dorzeczu Odry i Wisły*. Poznań.

du Gardin C. 1998. Le Campaniforme et l’ambre: mythe ou réalité? *Bulletin de la Société Préhistorique Française* 95/3, 343–350.

Glob P.V. 1945. Studier over den jyske Enkeltgravskultur. *Aarbøger for Nordisk Oldkyndighed og Historie*, 1–283.

Gomes Lisboa I.M. 1995. Trade and Interaction in the Early Chalcolithic of Central Portugal. In: M. Kunst (ed.), *Origens, Estruturas e Relaões das Culturas Calcolíticas da Penínsual Ibérica*, 149–158. Lisboa.

Harbison P. 1969. *The Daggers and the Halberds of the Early Bronze Age in Ireland.* Prähistorische Bronzefunde 7. München.

Harrison R.J. 1974. A Reconsideration of the Iberian Background to Beaker Matallurgy. *Palaeohistoria* 16, 63–105.

Harrison R.J. 1980. *The Beaker Folk. Copper Age archaeology in Wester Europe*. London.

Hodder I. 1982. Sequences of Structural Change in the Dutch Neolithic. In: I. Hodder (ed.), *Symbolic and Structural Archaeology*, 162–177. Cambridge.

Hodder I. 1990. *The Domestication of Europe. Structure and Contingency in Neolithic Societies*. Oxford-Cambridge.

Jacobs J. 1991. *Die Einzelgrabkultur in Mecklenburg-Vorpommern*. Schwerin.

Jensen J.A. 1973. Bopladsen Myrhøj. 3 hustomter med Klokkebaegerkeramik. *Kuml*, 61–122.

Kempisty A. / Włodarczak P. 2000. *Cemetery of the Corded Ware Culture in Żerniki Górne*. Warsaw.

Kośko A. 1981. *Udział południowo-wschodnioeuropeskich wzorców kulturowych w rozwoju niżowych społeczeństw kultury pucharów lejkowatych.* Poznań.

Kośko A. 1992. Z badań nad tzw. horyzontem starosznurowym w rozwoju późnoneolitycznej kultury społeczeństw Kujaw. *Acta Universitatis Lodziensis, Folia Archaeologica* 16, 85–95.

Kośko A. 1997. Chronological-genetic framework of the „A horizon” features in the development of the Kuiavian FBC. In: P. Siemen (ed.), *Early Corded Ware Culture. The A-Horizon – fiction or fact?* 125–133. Esbjerg.

Kowiańska-Piaszykowa M. 1957. Wyniki badań archeologicznych kurhanu III kultury unietyckiej w Łękach Małych, w pow. Kościańskim. *Fontes Archaeologici Posnanienses* 7, 116–138

Kowiańska-Piaszykowa M./ Kurnatowski S. 1954. Kurhan kultury unietyckiej w Łękach Małych, pow. Kościan. *Fontes Archaeologici Posnanienses* 4, 43–76.

Kristiansen K. 1989. Prehistoric Migrations – the Case of the Single Grave and Corded Ware Cultures. *Journal of Danish Archaeology* 8, 213–224.

Krywalcewicz M. 1997. Z badań nad kulturą trzciniecką na Polesiu białoruskim w dorzeczu Prypeci. *Folia Praehistorica Posnaniensia* 8, 69–97.

Kunst M. 1995. Zylindrische Gefässe, Kerbblattverzierung und Glockenbecher in Zambujal (Portugal). Ein Beitrag zur Kupferzeitlichen Keramikchronologie. *Madrider Mitteilungen* 36, 136–149.

Liversage D. 1987. Mortens Sande 2 – A Single Grave Camp Site in Northwest Jutland. *Journal of Danish Archaeology* 6, 101–124.

Lomborg E. 1973. *Die Flintdolche Dänemarks. Studien über Chronologie und Kulturbeziehungen des südskandinavischen Spätneolithikums*. København.

ŁAPOTT J. 1987. Tajne związki. In: Z. STASZCZAK (ed.), *Słownik etnologiczny. Terminy ogólne*, 344–346. Warszawa-Poznań.

MACHNIK J. 1966. *Studia nad kulturą ceramiki sznurowej w Małopolscy*. Wrocław.

MACHNIK J. 1979. Krąg kultur ceramiki sznurowej. In: W. HENSEL / T. WIŚLAŃSKI (eds.), *Prahistoria Ziem Polskich, T. II, Neolit*, 337–441. Wrocław.

MACHNIK J. 1998. Stan i perspektywy badań kultury ceramiki sznurowej w międzyrzeczu górnej Wisły, Bugu i Dniestru. *Sprawozdania Archeologiczne* 50, 13–27.

MÜLLER J. / CZEBRESZUK J. 2003. Bruszczewo – eine frühbronzezeitliche Siedlung mit Feuchtbodenerhaltung in Großpolen. Vorbericht zu den Ausgrabungen 1999-2001. *Germania*, in press.

MÜLLER J. / KADROW S. / CZEBRESZUK J. 2003. Chronologie/Chronologia. In: J. CZEBRESZUK. / J. MÜLLER (eds.), *Bruszczewo, Grosspolen. Ein befestigte Siedlung aus Frühbronzezeit. Bruszczewo, Wielkopolska. Osada obronna z wczesnej epoki brązu*. Poznań-Bamberg, in print.

NEUSTUPNY E. 1969. Economy of the Corded Ware Culture. *Archeologické rozhledy* 21, 43–67.

NICOLIS F. (ed.) 2001. *Bell Beakers Today. Pottery, people, culture, symbols in prehistoric Europe*. Trento.

PRZYBYTEK M. 1996. Osadnictwo neolityczne i wczesnobrązowe w Narkowie, woj. włocławskie, stanowisko 16. Poznań, M.A. thesis manuscript.

RANDSBORG K. 1995. *Hjortspring. Warfare & Sacrifice in Early Europe*. Aarhus.

RASMUSSEN M. 1993. *Bopladskeramik i Ældre* Bronzealder. Aarhus.

Archives of R. SCHROEDER, Roland Schroeder Archiv, Kiel University. Kiel.

SHERRATT A. 1987. Cups that cheered. In: W.H. WALDREN / R.C. KENNARD (eds.), *Bell Beakers of the West Mediterranean*, BAR International Series 331, 81–114. Oxford.

SHERRATT A. 1991. Sacred and Profane Substances: the Ritual Use of Narcotics in Later Neolithic Europe. In: P. GARWOOD / D. JENNINGS / R. SKEATES / J. TOMS (eds.), *Sacred and Profane: Proceedings of a conference on archaeology ritual and religion*, Oxford University Committee for Archaeology Monographs, 32, 50–64. Oxford.

SHERRATT A. 1995. Alcohol and its Alternatives: Symbol and Substance in Pre-industrial Cultures. In: J. GOODMAN / P.E. LOVEJOY / A. SHERRATT (eds.), *Consuming Habits. Drugs in History and Anthropology*, 11–46. London and New York.

SIEMEN P. 1997. Probleme der älteren jütische Einzelgrabkultur. In: P. SIEMEN (ed.), *Early Corded Ware Culture. The A-Horizon – fiction or fact?*, 199–231. Esbjerg.

SIEMEN P. (ed.) 1997. *Early Corded Ware Culture. The A-Horizon – fiction or fact?* Esbjerg.

SIMONSEN J. 1983. A late Neolithic hous site at Tastum, Northwestern Jutland. *Journal of Danish Archaeology* 2, 81–89.

STRAHM CH. (Hrsg.) 1995. *Das Glockenbecher-Phänomen. Ein Seminar.* Freiburg.

STRUVE K. W. 1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen*. Neumünster.

VANDKILDE H. 1996. *From Stone to Bronze. The Metalwork of the Late Neolithic and Earliest Bronze Age in Denmark*. Aarhus.

VANDKILDE H. 2001. Beaker Representaion in the Danish Late Neolithic. In: F. NICOLIS (ed.), *Bell Beakers Today. Pottery, people, culture, symbols in prehistoric Europe*, 333–360. Trento.

WETZEL G. 1969. Ein Dünenwohnplatz bei Lanz, Kreis Ludwigslust. *Bodendenkmalpflege in Mecklenburg* 1967 (1969), 129–169.

WETZEL G. 1976. Funde der Glockenbecherkultur östlich der Elbe auf dem Gebiet der DDR. *Veröffentlichungen des Museums für Ur- und Frühgeschichte Potsdam* 10, 55–74.

ZICH B. 1997. Das erste Aunjetitzer Metallgefäß. In: C. BECKER / M.-L. DUNKELMANN / C. METZNER-NEBELSICK / H. PETER-RÖCHER / M. ROEDER / B. TERŽAN (Hrsg.), *Beiträge zur prähistorischen Archäologie zwischen Nord- und Südeuropa. Festschrift für Bernhard Hänsel*, 237–252. Espelkamp.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

BELL BEAKER POTTERY IN DENMARK - ITS TYPOLOGY AND INTERNAL CHRONOLOGY

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The first Bell Beakers to be recognized as such in Denmark were from secondary burials in passage graves at Bigum (NORDMAN 1915) and Kirke Helsinge (ROSENBERG 1929), showing that Bell Beaker pottery was used also in Denmark, even if the quantity was small. C.J. Becker (1937; 1957) and P.V. Glob (1945) dealt with the subject, but there was no real progress until J. Aa. Jensen's excavation of the Bell Beaker settlement at Myrhøj, in the publication of which attention was called also to a number of other Bell Beaker sites (JENSEN 1973). The number of known finds of BB has been increasing steadily since the passing of legislation in Denmark requiring archaeological examination in advance of land development, and by now quite a lot of material has accumulated, but very little has been published about it. This is unfortunate, for the material belongs to an important regional group of the Bell Beaker culture, about which little was known before and quite a lot now.

Fig. 1 shows the positions of 66 sites in Denmark at which Bell Beaker pottery occurred. These are what I have traced down so far, but there are certainly more. Only bell beakers, including sherds, are shown. Straight-walled beakers with Bell Beaker decoration, are not included except when they occur in associated finds with other beaker pottery; nor are clay sieves (EBBESEN 1978), wrist bracers (SKOV 1970), barbed and tanged arrowheads, and V-perforated buttons, some of which have been dealt with by other authors.

Dwelling Structures

Most of the points show occupation sites. The flat inhumation cemeteries and barrow burials that were so characteristic of the Bell Beaker culture in mainland Europe and Great Britain, are absent or nearly so in Denmark – as they are also in Ireland and northern Poland. The few Bell Beaker graves in Denmark were nearly all secondary burials in megalithic tombs.

At the settlements it is not just occupation rubbish that is preserved, but in a majority of cases actual remains of dwellings (JENSEN 1973, SIMONSEN 1983; 1987, ETHELBERG 1987, BOAS 1993). The typical elements of these were sunken floor areas and postholes. The sunken floors were more or less sub-rectangular concavities up to 60 cm deep — often considerably less — dug into the natural subsoil and filled with dark earth that it some cases was rich in finds. From their alignment and orientation the postholes must belong to the same structures as the sunken floors, but credible plans with complete wall lines and an axial row of posts to hold up the midridge are rare (BOAS 1993). The commonly held opinion is that the sunken floors were specialized dwelling areas inside larger post-built buildings. The sunken area is normally situated towards the east and some buildings seem to have had more than one sunken room. Dwellings of this kind occur in Single Grave and Bell Beaker contexts alike, so there seems to be full continuity between these in terms of settlement architecture.

Pottery

The assemblages of Bell Beaker pottery from Denmark fall rather obviously into three groups.

Maritime assemblages: the first kind is represented by about twelve sites at which maritime beakers, or at least sherds with the unchanging, narrow, hatched zones that characterize Maritime beakers, are common. Most maritime beakers from Denmark have the special details that the hatched zones are narrower than the intervening blanks, and the hatching lies rather flat (Fig. 2:1, 2). Sometimes one of the narrow zones is made somewhat wider and filled with decoration of

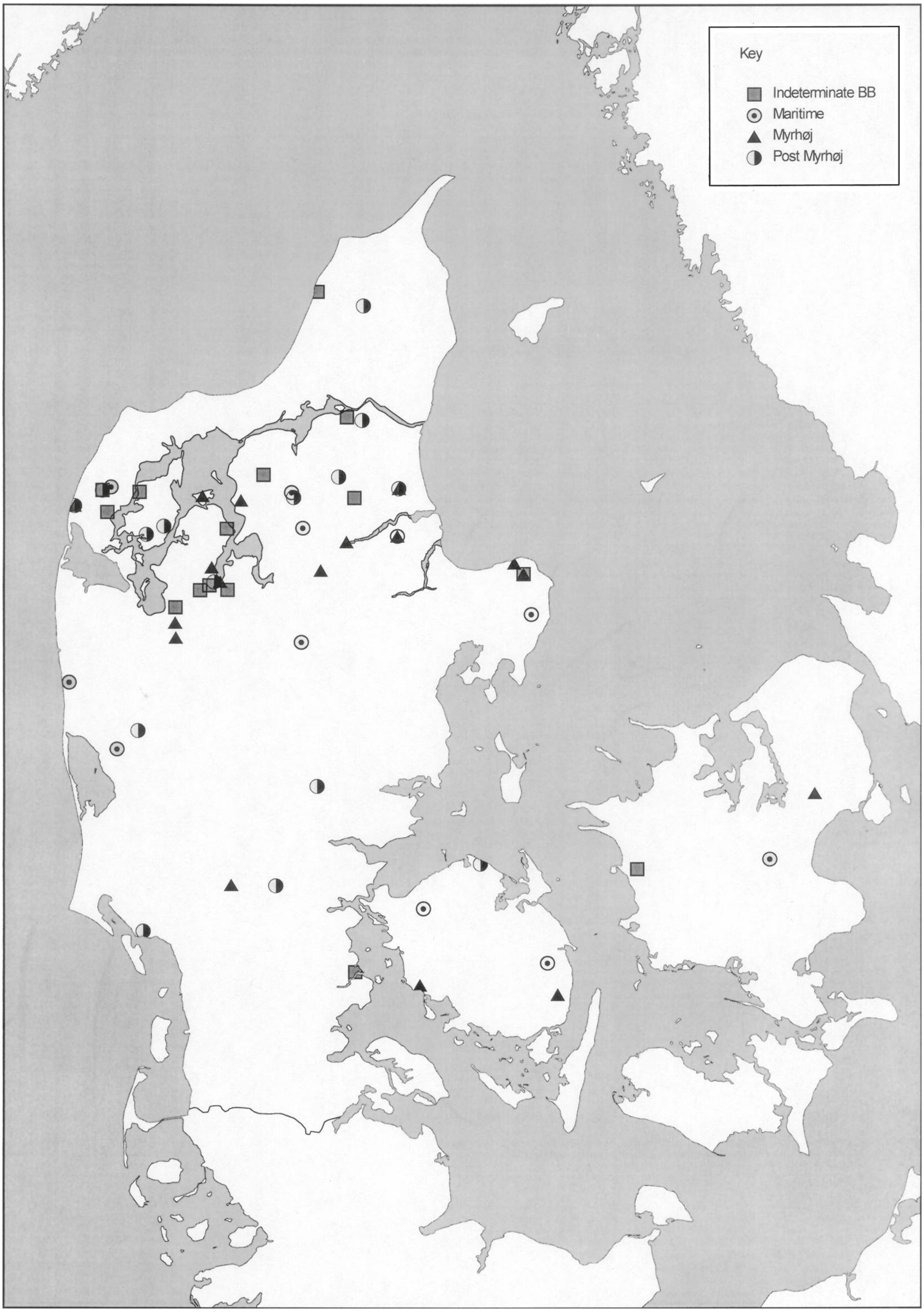
Key
■ Indeterminate BB
⊙ Maritime
▲ Myrhøj
◐ Post Myrhøj

Fig. 1. Map showing beaker distribution in Denmark.

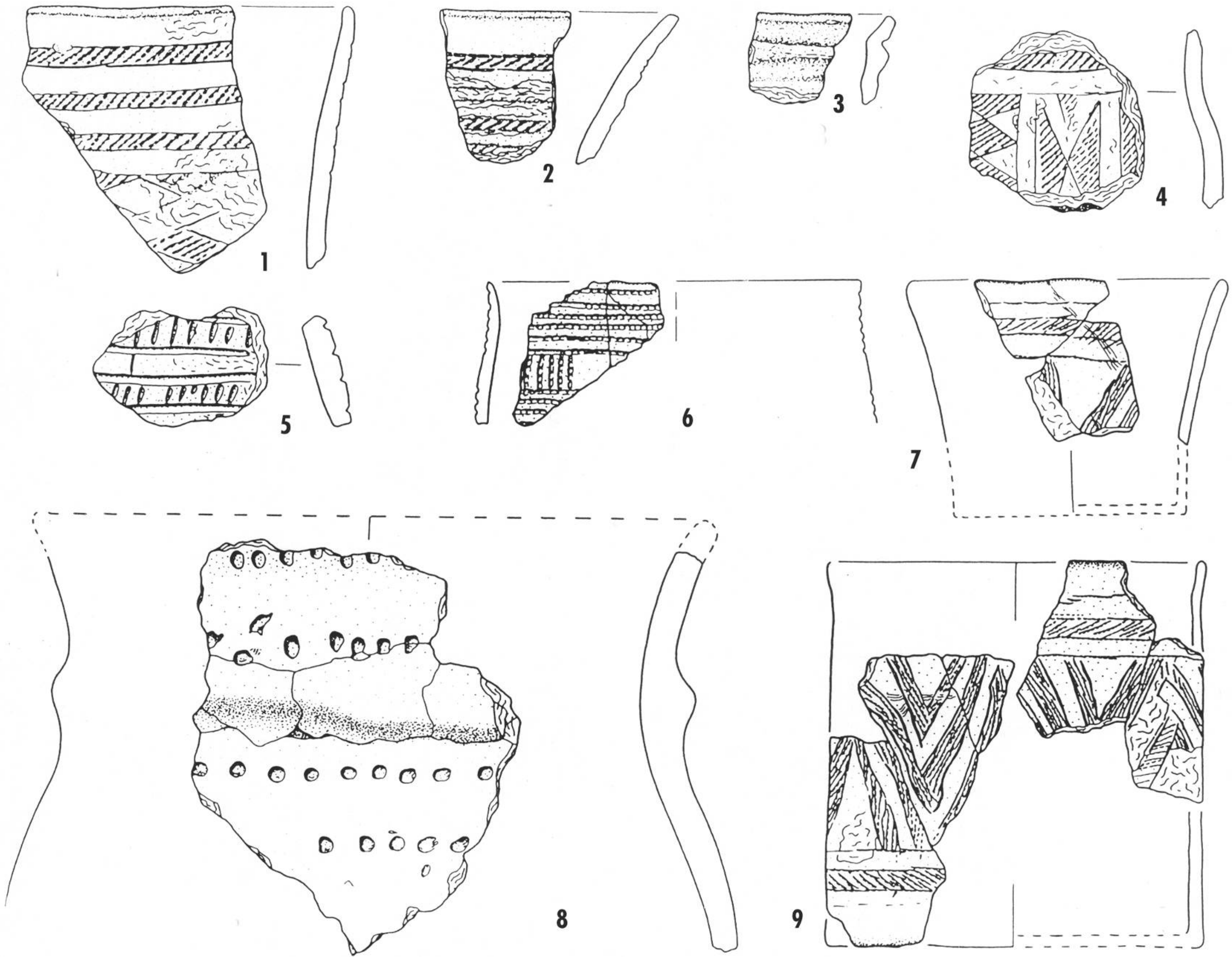

Fig.2. Maritime phase pottery, Bjergene VI and other sites. Scale 1:2. Drawn by Anika Liversage.

broad zone type such as hatched triangles, rhombs or chevrons (Fig. 2:1, 4, 7, 9). The reconstructions, so far as they go, indicate tall relatively narrow pots with thin walls and a gracile shape. These may all turn out to be transitional between the original maritime beakers with narrow-zone patterns only and beakers of Myrhøj type, with their more evolved form and ornamentation.

Curved beakers were not the only form of vessel the inhabitants used, and the settlement waste included the remains of vessels with other forms and functions and patterns of decoration as well. The next commonest form after the curved profile beaker was the straight-walled beaker (Fig. 2:7, 9). The conical bowl was present too, both in a decorated (Fig. 6, 7) and a plain version (Fig. 6, 9). Of undecorated or mainly undecorated vessels we have the jars with cordon near the rim. These come in a variety of sizes from small (Fig. 2:3) to rather large (Fig. 2:8) and there are messier and tidier versions.

Myrhøj group: The pottery of the Myrhøj group is more involved, and was the only style known about until quite recently. In overall shape the vessels show a tendency to be squatter, and they could hardly be called gracile. The material is typified by low, round-bodied, or sometimes carinated beakers with curved profile (Fig. 5, 4; Jensen 1973, 98). Their height and diameter are approximately the same. A single broad zone containing patterns of broad zone type is found on the side or shoulder. Above and below this there are a small number of narrow zones of maritime type. These can be hatched or cross-hatched, and are not exclusively hatched as (Fig. 5, 4) in the maritime group. The broad-zone patterns likeliest to be met are the following: fields of small lozenges (the commonest motif of the Myrhøj group, bigger lozenges that span the zone, various triangular patterns, the bar chevron, envelope pattern, and perhaps some others. These motifs are often fitted into (Fig. 3:3, 5) metopes in the broad zone, and the metope separators are one or more vertical (sometimes oblique) pillars. Pillar pattern can also occur alone without marking out metopes (Fig. 3:1; 4:4).

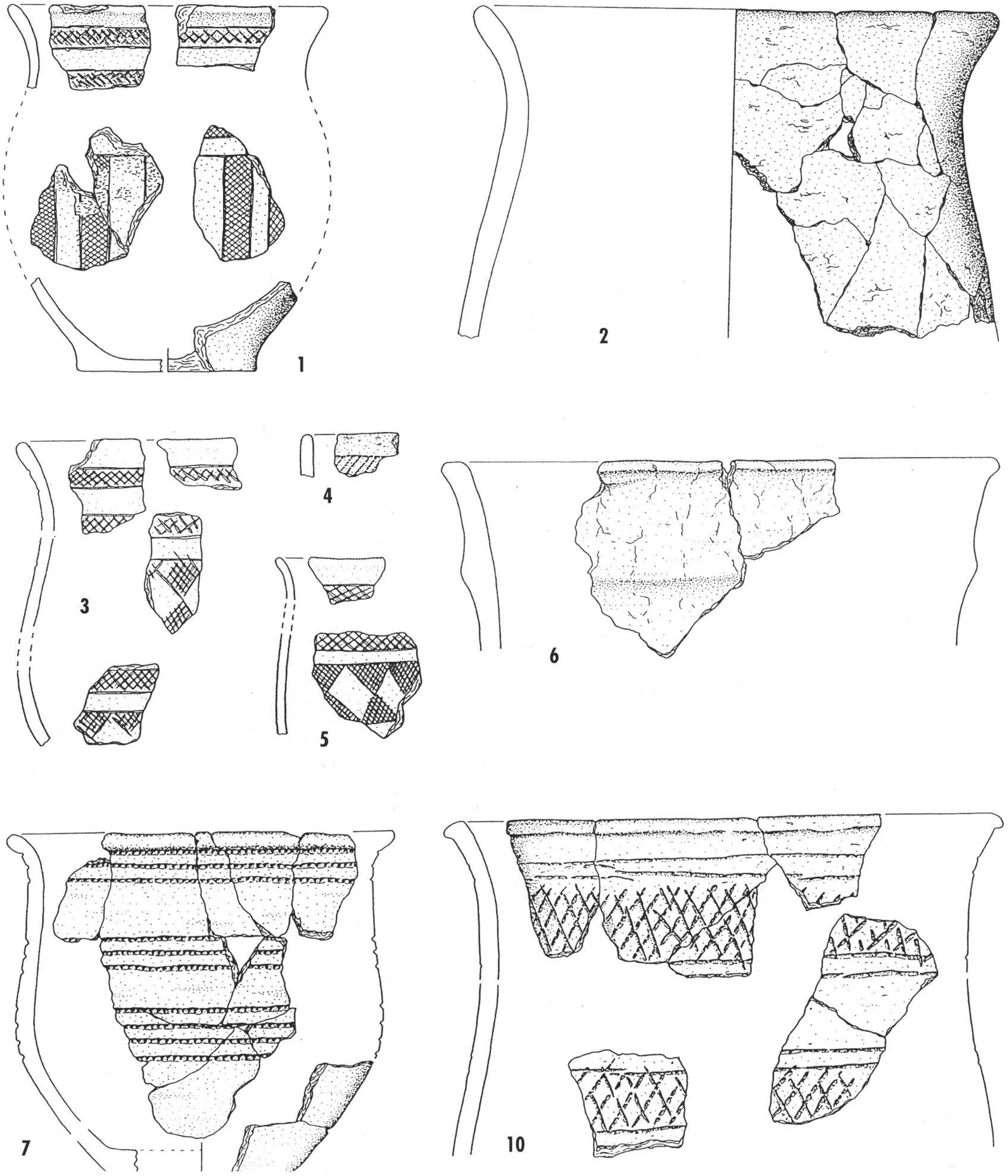

Fig. 3. Myrhøj phase pottery from sites in Lodbjerg sandhills. Scale 1:2. Drawn by Eva Koch.

The other forms are not a great deal different from those found in the maritime group, but there are some differences in decoration. Straight-walled beakers are present, sometimes with maritime ornament (Jensen 1973, Fig. 58); They appear to be less common than in the foregoing phase. Conical, bowls are present, but are always undecorated (Jensen 1973, Fig. 62-64). Among the coarser wares are found many jars and vessels of various sizes with numerous horizontal grooves or furrows of various width, and also jars with a cordon under the rim. Finally we find in both phases larger pots with miscellaneous surface covering impressions made with a stick or fingernail. Attention may be called to a sherd of a sieve (Fig. 7:10)

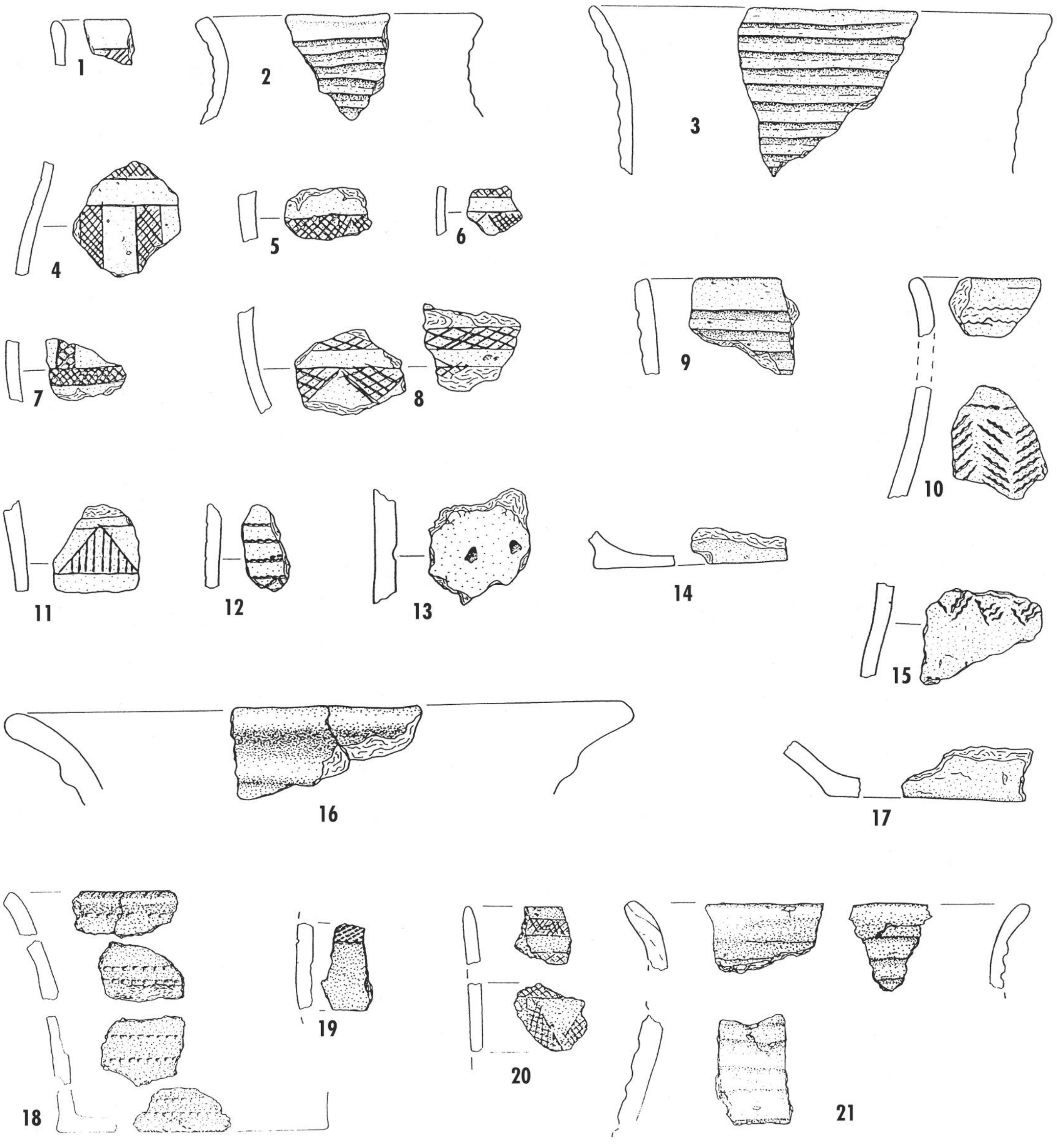

Fig. 4. Myrhøj phase pottery from sites in Lodbjerg sandhills. Scale 1:2. Drawn by Eva Koch.

Degeneration phase: Many settlements from the Late Neolithic belonged to neither the maritime nor the Myrhøj group, and are not intermediate between them either. It seems that after a time the fine Bell Beaker pottery went into decay, the originally logical decoration lost its meaning for potters and their customers alike, and the forms became less varied in shape and size. Good examples of decoration that was no longer understood but was being repeated brainlessly are the beakers from Ljørslev and Bårdesø (Glob 1945, Fig. 60: 2; Becker 1937, Fig. 47). Settlement ware using Myrhøj motifs that have lost their original meaning was found at the Middle Site at Lodbjerg (Fig. 7), where hatched zones (Fig. 7:5), lozenges (Fig. 7:6), and chevrons (Fig. 7:3, 7) of various amplitude can be identified, but are disconnected and sloppily applied. Much of the decoration at this site is impressed with a curious curved tool.

The commonest pattern in the degenerate stage as a whole, however, was bunches of horizontal lines.

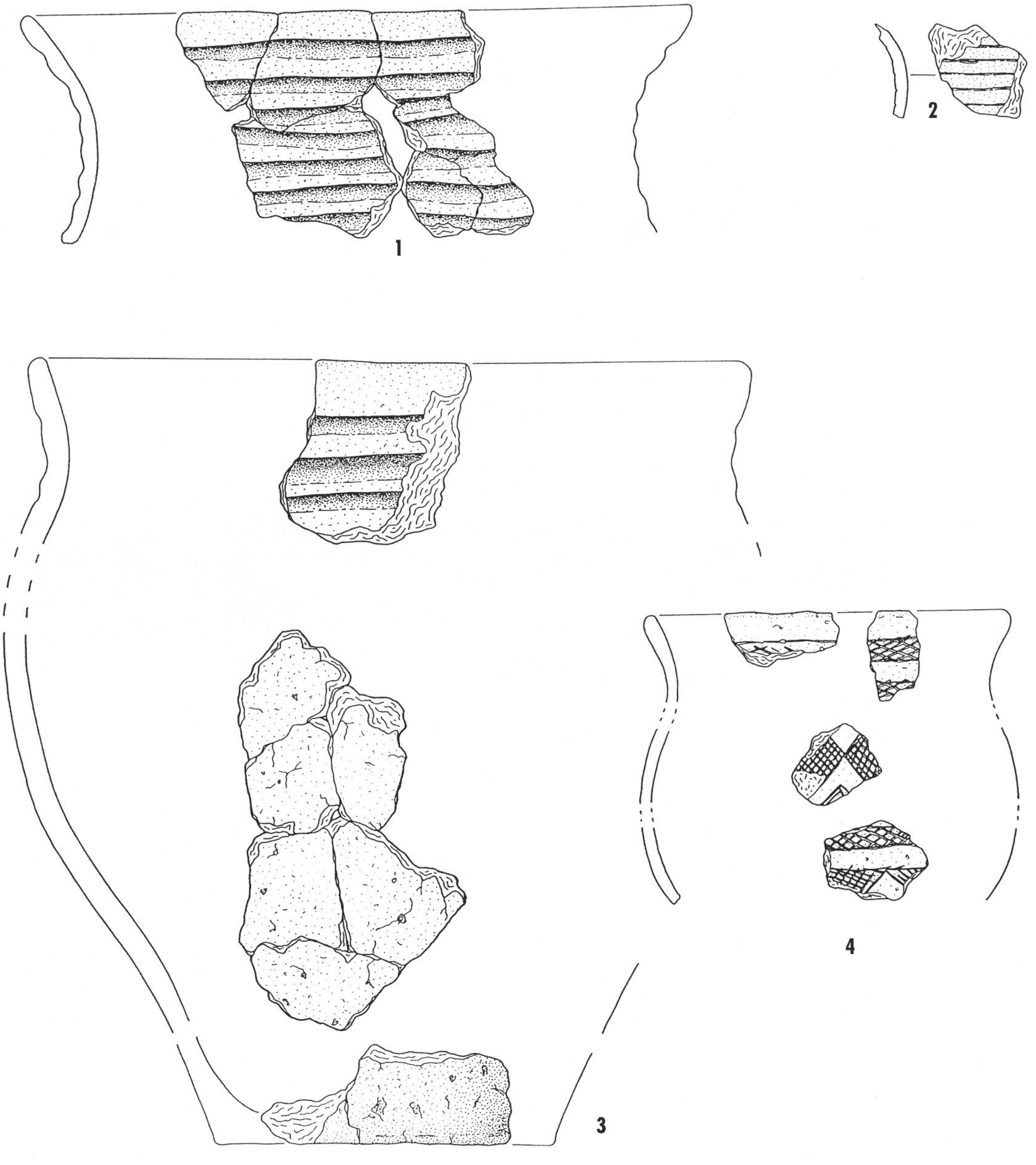

Fig. 5. Myrhøj phase pottery from Mortens Sande. 1 – Lodbjerg. Scale 1:2. Drawn by Eva Koch.

An example of a settlement where this kind of ornament predominates is the upper find stratum at the Barrel Site in Lodbjerg parish (Fig. 6). A certain monotony of forms makes itself felt at this site, and it should also be noted that some of the decoration is executed in the „barbed wire" technique (Fig. 6:2, 10). At Gjævhul Bakker lower find stratum a very few crudely cut lines are present under some of the rims (Fig. 8:4, 6). This looks like a further stage of the same negative development, leading to the very coarse, completely undecorated pottery in the find stratum immediately above. Several of the sites where bunches of horizontal lines are the only decoration shown in the map (Fig. 1), are recent discoveries. Older published finds also exist such as a jar from the well known stone cist at Gravlev, and some pottery from Store Arden (BECKER 1937) and Gab Lake, etc.

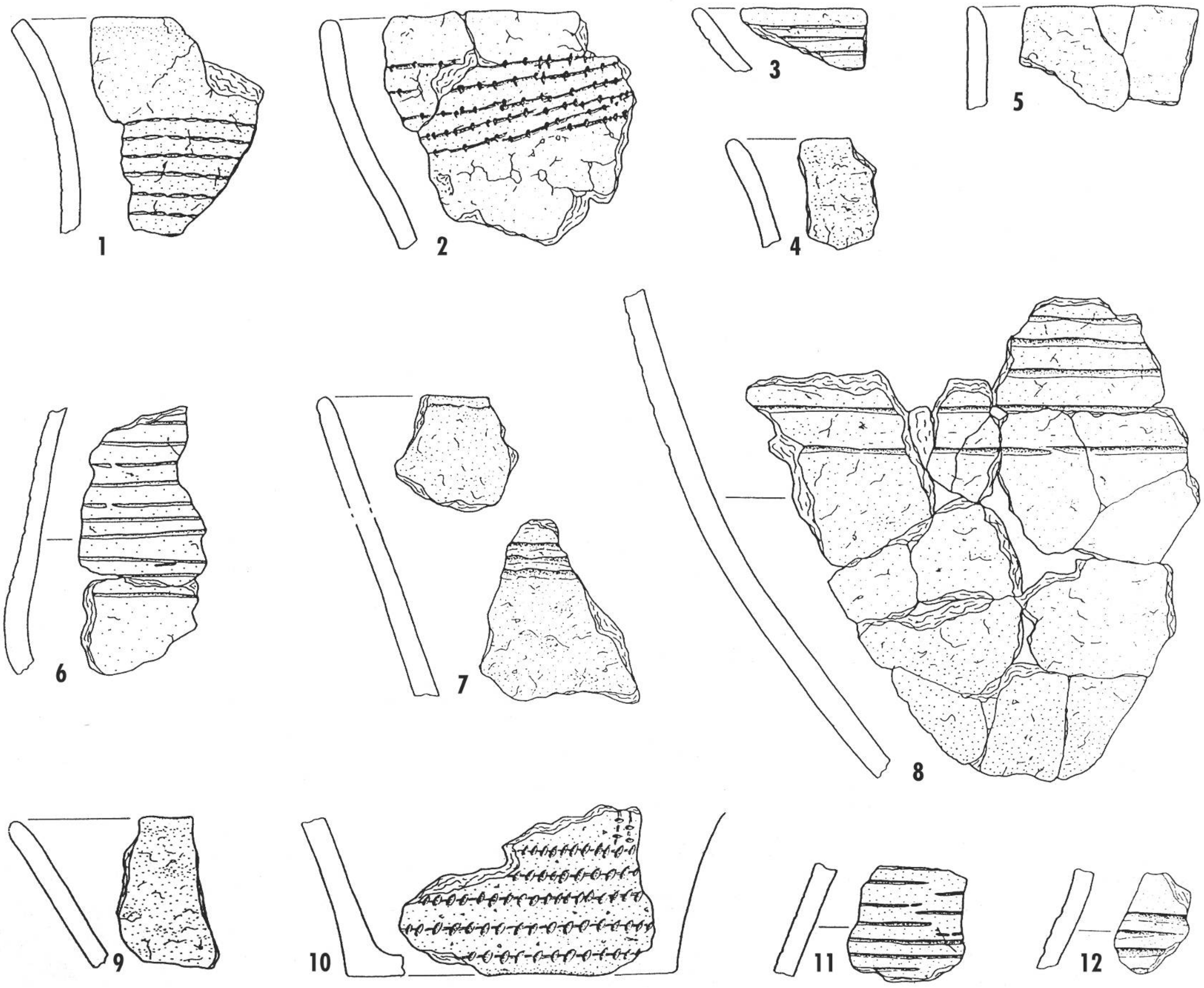

Fig. 6. Degenerate Bell Beakers. Barrel Site, upper find stratum. Scale 1:2. Drawn by Eva Koch.

Some people might object to calling wares with such inferior decoration „Bell Beaker" at all. Bell Beaker is a fine, reddish, technically and artistically superior ware; but words mean what we want them to, and it is useful to make completely clear that the late degenerate wares were direct successors of the much more artistic work of the Maritime and Myrhøj phase.

Summing up then, we can without difficulty divide the habitation assemblages of Bell Beaker pottery into three typochronological groups, which we will call "maritime", "Myrhøj", and "degenerate". Everything points to the evolution from one phase to the next as having been a smooth one. Any attempt to reverse the direction of the development would be blocked by the stratigraphy of the Lodbjerg cliff.

International Perspectives

Settlements where Bell Beaker pottery was used may have been known all the way from the Iberian peninsula and Italy to northern Jutland, but it was very unevenly scattered over this area, tending to fall into regional clusters separated by territory with very little BB material of any kind. This is well illustrated by Harrison's maps (1980, 43 and 53).

Fig. 1 is a recent map of the north Jutland group. It can be seen that BB finds in Denmark are concentrated around the Limfjord in north Jutland, and there are a few findspots in other parts of the country as well.

The question naturally arises of relations between different groups. Is there any other place where maritime beakers have the kind of importance they have in north Jutland? If one accepted the premise that maritime beakers were the oldest Bell Beakers, it would look as if this type of vessel originated in north Jutland because they were so numerous and so much alike there. However according to modern conceptions Bell Beaker pottery was most probably derived in the Rhine drainage area and NW Germany from the AOO (all over ornamented) Single Grave beakers. Maritime beakers occur intermittently west of the Elbe,

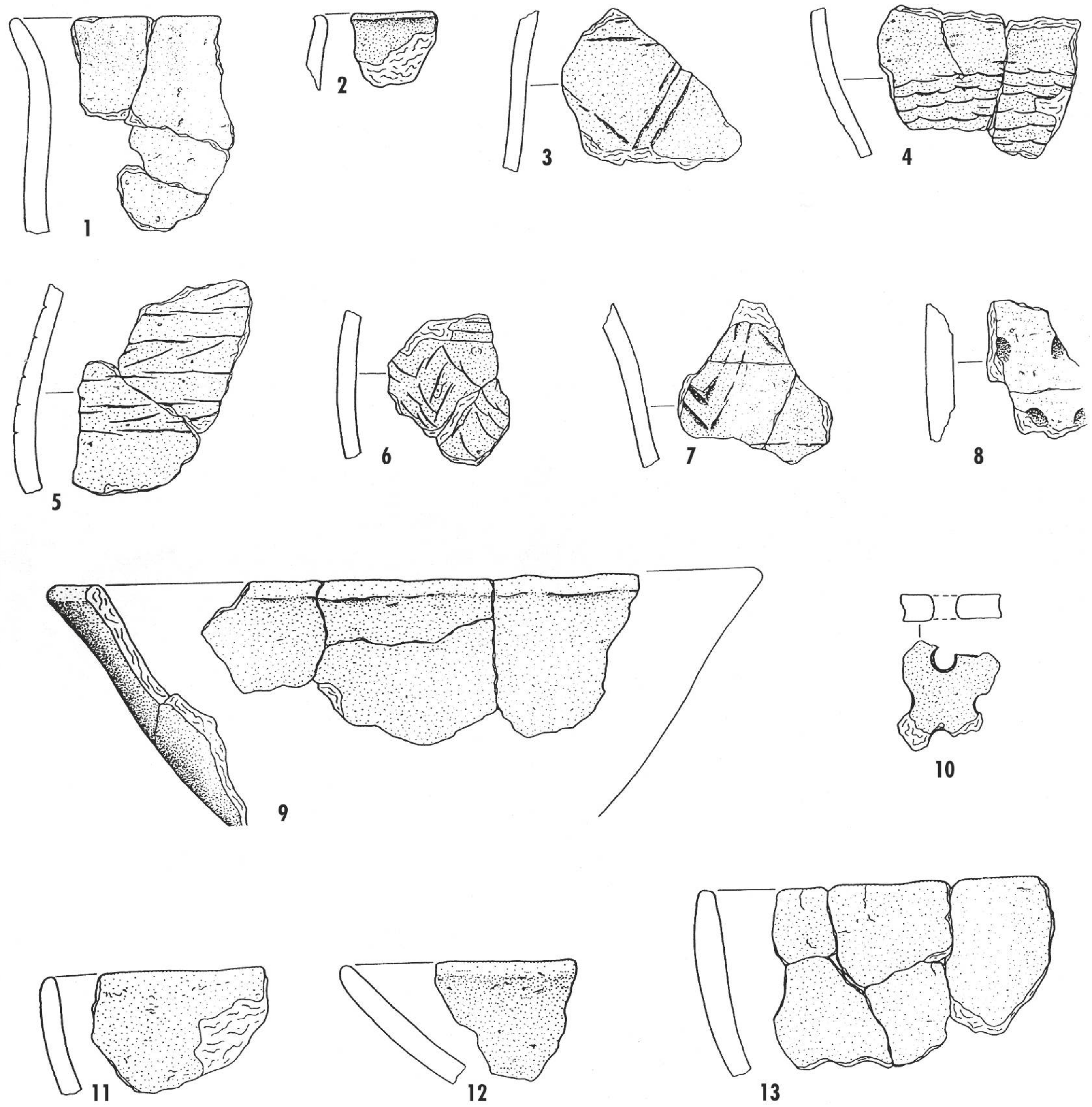

Fig. 7. Degenerate Bell Beakers. Middle Site, lower find stratum. Scale 1:2. Drawn by Eva Koch.

but there they are less uniform and do not have the specific north Jutland characteristic of blanks wider than the narrow zones and „lying" hatching.

Next there was a tendency in the whole northern part of the BB culture's area to reduce the relative height of the fine ware beakers.

This led to the Myrhøj and late Veluwe styles. The Veluwe beakers are fairly common in the middle Rhine basin (Gebers 1984) and further downstream (Bantelmann 1983; Lanting / Van Der Waals 1976; Strahl 1990). Like the Myrhøj beakers the late Veluwe beaker is characterised by a squat shape and having only one broad zone, but in other respects the whole balance and conception of the two evolved beaker types is very different. The compositional idea of the late Veluwe beakers centres on the heavy, vertical rim on which as many zones as possible are squeezed together as the ultimate development of „zone separation", as the Dutch called it.

The Myrhøj beakers are also squat with only one broad zone, but they have a very simple, out-turned rim ornamented with one or more narrow hatched zones. The effect is much more relaxed. The broad zone is filled in a more relaxed way too. It does not

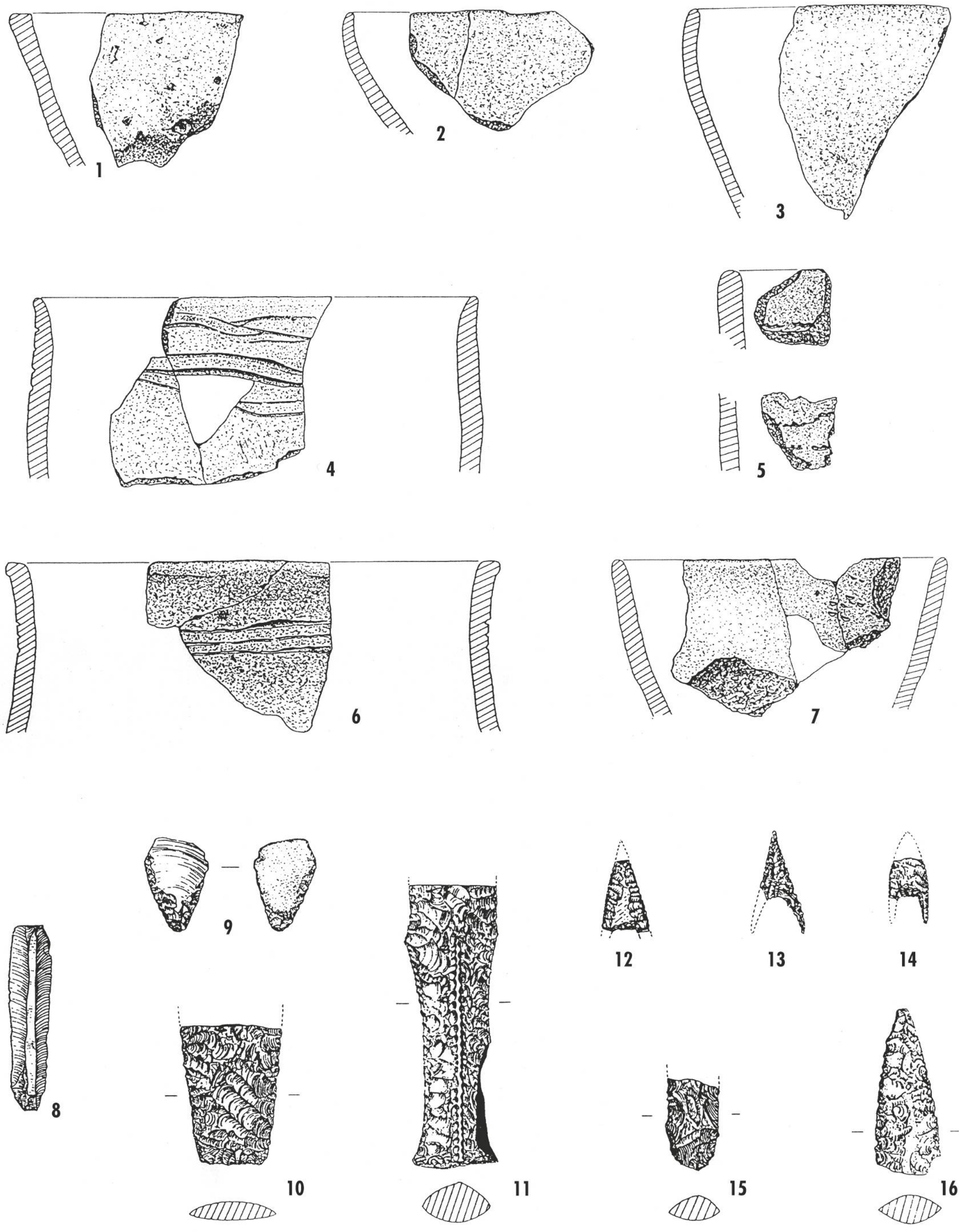
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Fig. 8. Degenerate Bell Beakers. Gjævhul Bakker, lower find stratum. Scale 1:2. Drawn by Lars Jørgensen.

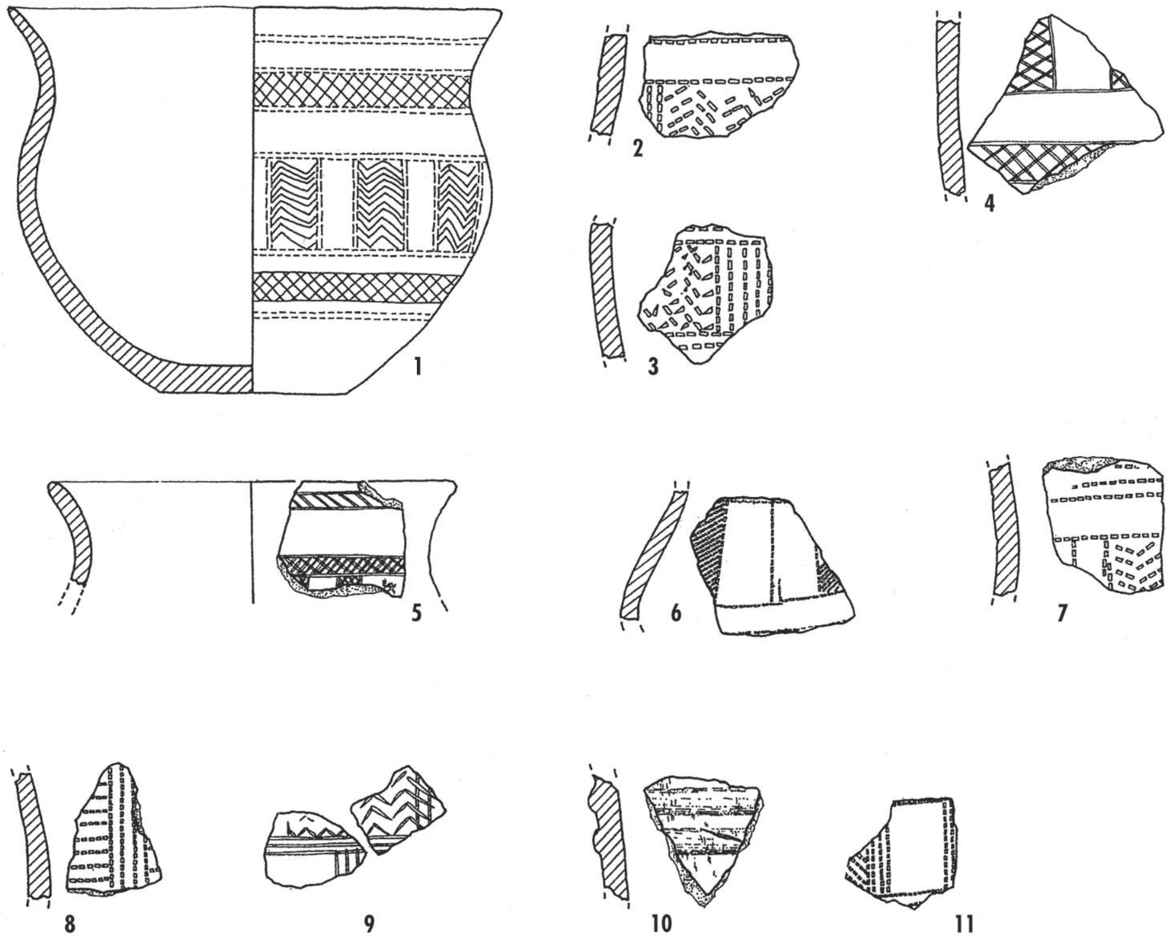

Fig. 9. Myrhøj pottery from Mecklenburg. After Wetzel (1976). 1 – Pinnow; 2, 3 – Lanz; 4–5, 7–9 – Strohdehne; 6 – Muchov. Scale 1:2.

really look as if the Myrhøj style was derived from the late Veluwe style, but the two styles can certainty be regarded as parallel regional developments based on a shared development of pot shape.

The best external connection is with Mecklenburg. Some pottery from Mecklenburg is shown in Fig. 9 (after Wetzel, 1976). The pottery is very fragmentary, but many of the small sherds show fragments of a broad zone with pillar pattern in cross-hatching or vertical line filling (Fig. 9: 3, 8), and others have cross-hatched narrow zones. Beaker on fig. 9: 5 has the quickly outbent rim characteristic of Myrhøj beakers. Vessel on fig. 9: 1 is the complete reconstruction of a squat beaker in Myrhøj style, having a single broad zone of pillar pattern. There is strictly no reason why some of the small sherds should not be from beakers with two broad zones, but the motifs in detail are so much like those from north Jutland that much of the material must represent beakers of Myrhøj type. Further afield only a Myrhøj beaker from Weddingten, Kr. Goslar is known to the author (Stegen 1942, Pl. 7,1). Neither Strahl in his great catalog of Beaker pottery from the Elbe-Weser triangle, nor Bantelmann in his of the middle/lower Rhine basin shows any pottery in this style. The style must therefore be of rather restricted occurrence, confined to Jutland and Mecklenburg. But it was only in this one respect, not across the full spectrum of pottery forms and ornament, that Jutland and Mecklenburg were in agreement. Mecklenburg does not have straight-walled beakers, which were an important element in Jutland. The trait called zone contraction seems common enough in Mecklenburg, but is rare in Denmark. It would therefore be premature to talk of a Mecklenburg-Jutish group, but during the Myrhøj phase connections to Mecklenburg were nevertheless stronger than to any other region. Strictly this applied only to the potting craft, but the potting craft may echo some more important trends in society.

We still lack a theory of origin for this extraordinary pottery, which had so much logic and intelligence in its decoration and was so much alike over extraordinary distances. To begin with it may be assumed that it could not have achieved the level it did, or been spread so widely, if it was not attributed a great deal of importance of some kind. As it is hard to see how the practical importance of earthenware could suddenly have skyrocketed this way, we may suppose that it acquired some sort of symbolic importance as representing something greater. From there on there is free play for scenarios, of which some scholars have availed themselves very fully!

The theory that a new pan-national elite, governing or exerting strong moral or religious influences on an unchanged population, has a good deal to recommend it. This elite can perfectly well have sprung partly or even wholely from the local populations, but its ideology was „global" and its members did a great deal to make this plain by maintaining close ties over long distances with other branches of the same elite. It was the ties of power or belief that made possible ties in the pottery. The elite governed for a period, but in due course their system broke down, and with it the significance of their fine pottery.

The above of course is just a little bit conjectural but there is at any rate a good deal of ordinary archaeological evidence of a basic continuity in our area between the „Beaker Folk" and the preceding „Single Grave Culture". The people lived in the same kind of houses with hollowed out floor areas and irregular wooden superstructure. They also used much the same pottery coarse ware – only Bell Beaker fine ware was new, and the new symbolic nature of pottery did not extend to coarse kitchen wares. Further evidence of continuity at a „bread and butter" level, is the local continuity of subsistence strategy revealed by investigations into prehistoric settlement and landscape development in the Lodbjerg coastal belt (Liversage / Robinson 1995).

There is no support in the evidence for the arrival of a new „Beaker People". On the other hand earlier ideas of „diffusion of cultural influence" (represented *pars pro toto* by the transmission of potting ideas), do make a certain amount of sense; but with the BB phenomenon the geographical scale is disproportionate and unprecedented.

REFERENCES

Bantelmann N. 1983. *Endneolitische Funde im rheinisch-westfälischen Raum.* Offa Bücher 44, Neumünster.

Becker C.J. 1937. Enkelgravkulturen på de danske øer. *Årbøger for Nordisk Oldkyndignet og Historie* 1936, 145–231.

Becker C.J. 1957 Nogle keramikfund fra det jyske enkeltgravsområde. In: Pettersson L. (ed.), *Studia Neolithica in Honorem Aarne Äyräpää.* Finska Fornminnenesföreninges Tidskrift 58. Helsinki.

Boas N.A. 1993. Late Neolithic and Bronze Age Settlements at Hemmed Church and Hemmed Plantation, East Jutland. *Journal of Danish Archaeology* 10, 1991, 119–35.

Ebbesen K. 1978. Sikar og klokkebægerkultur. *Holstebro Mus. Årskrift* 1977, 51–64.

Ethelberg P. 1987. Early Bronze Age Houses at Højgård, Southern Jutland. *Journal of Danish Archaeology* 5 (1986), 152–67.

Gebers W. 1984. *Das Endneolithikum im Mittelrheingebiet.* Saarbrücken.

Glob P.V. 1945. *Studier over den jyske enkeltgravskultur.* Årbøger for Nordisk Oldkyndignet og Historie 1944. København.

Harrison R.J. 1980. *The Beaker Folk. Copper Age archaeology in Western Europe.* London.

Jensen J.Aa 1973. Bopladsen Myrhøj. *Kuml* 1972, 61–122.

Lanting J.N./ Van Der Waals J.D. 1976. Beaker Culture Relations in the Lower Rhine Basin. In: Lanting J.N. / Van Der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974,* 1–80. Bussum / Haarlem.

Liversage D. / Robinson D. 1995. Prehistoric Settlement and Landscape Development in the Sandhill Belt of Southern Thy. *Journal of Danish Archaeology* 11, 1992-93. 39–56.

Nordman C.A. 1917. Jättestuer i Danmark. Nya Fund. *Nordiske Fortidsminder II.*

Rosenberg G. 1929. Nye jættestuefund. *Årbøger for Nordisk Oldkyndignet og Historie* 1929, 188–262.

Simonsen J. 1983. A Late Neolithic House Site at Tastum, Northwestern Jutland. *Journal of Danish Archaeology* 2, 82–89.

Simonsen J. 1987. Settlements from the Single Grave Culture in NW Jutland. A Preliminary Survey. *Journal of Danish Archaeology* 5, 1986, 135–51.

Skov T. 1970. En handledsbeskytter fra Sahl sogn. *Holstebro Museums Årsskrift.* 1969-70, 27–31.

Stegen K. 1942. Die Glockenbecherkultur in Nordwestdeutschland. *Nachrichten aus Niedersachsens Urgeschichte* 16, 46–65.

Strahl E. 1990. *Das Endneolithikum im Elb-Weser Dreieck.* Hildesheim.

Wetzel G. 1976. Funde der Glockenbecherkultur östlich der Elbe auf dem Gebiet der DDR. *Veröffentlichungen des Museums für Ur- und Frühgeshichte Potsdam* 10, 1976, 55–74.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

EINFLÜSSE DER GLOCKENBECHERKULTUR IN NORDDEUTSCHLAND

Kathrin Mertens (Kiel, Germany)

Zwar wird Norddeutschland gemeinhin nicht mehr zum eigentlichen Verbreitungsgebiet der Glockenbecherkultur gezählt, dessen nördliche Ausdehnung – Großbritannien einmal ausgenommen – im Osten bis in das Mittelelbe-Saale-Gebiet und nach Nordhessen sowie im Westen in das Niederrheingebiet hineinreicht (MÜLLER-KARPE 1974, 240; PREUSS (Hrsg.) 1998, 416ff.; 1999, 33ff.), es lassen sich jedoch starke Einflüsse dieser Kultur nachweisen, die sich besonders in der Ornamentik einzelgrabzeitlicher Keramik widerspiegeln.

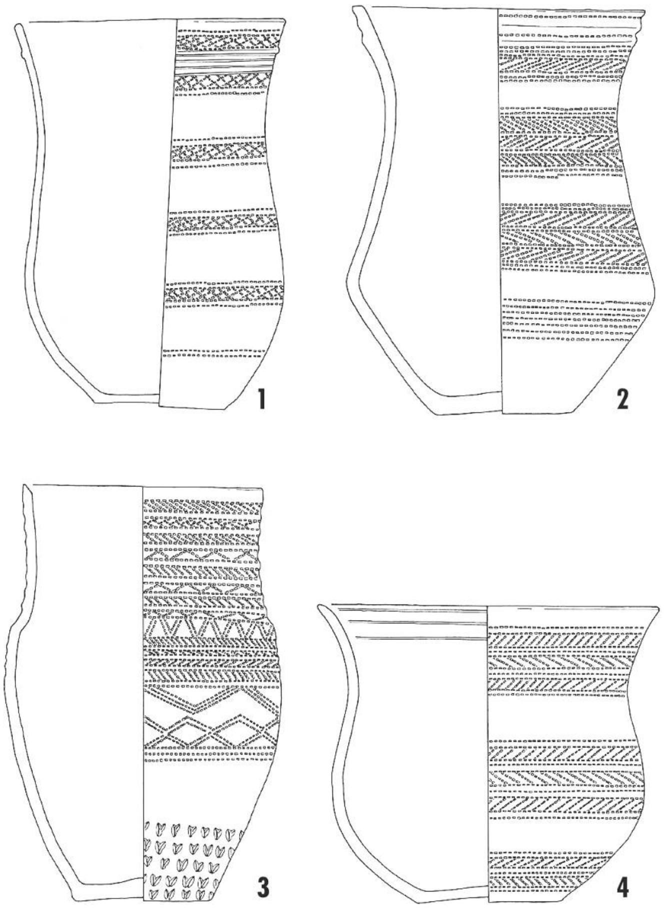

Abb. 1 1. Helvesiek, Kr. Rotenburg; 2. Ehestorf, Kr. Rotenburg; 3. Freschluneburg, Kr. Cruxhaven; 4. Uthlede, Kr. Cruxhaven (STRAHL 1990).

Für den vorliegenden Artikel wurde versucht, anhand der zur Verfügung stehenden Literatur die von der Glockenbecherkultur beeinflußten Funde für die norddeutschen Bundesländer Schleswig-Holstein, Hamburg, Mecklenburg-Vorpommern, Bremen und das nördliche Niedersachsen zusammenzustellen. Auch wenn das Bild aufgrund des regional unterschiedlichen Forschungs- und Publikationsstandes sicherlich nicht vollständig ist, so sind – wie im folgenden zu zeigen sein wird – doch einige interessante Beobachtungen möglich.

Für diese Untersuchung wurden neben vereinzelt vorkommender echter Glockenbecherkeramik (z.B.

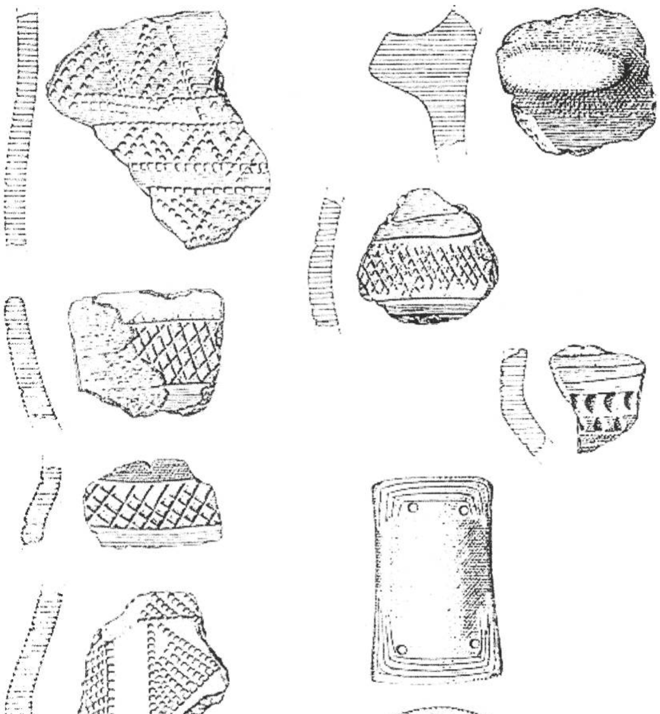

Abb. 2 Techentin, Kr. Parchim (nach JACOBS 1991).

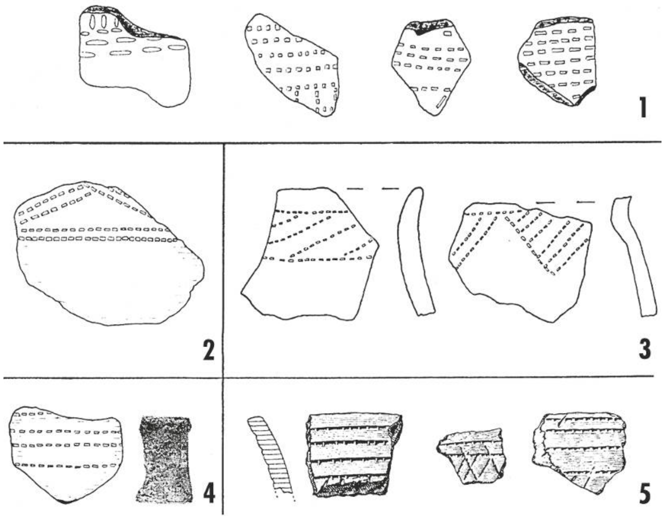

Abb. 3 1. Mühl-Rosin; 2. Heinrichshof; 3. Sandförde; 4. Schlakendorf; 5. Uchow (nach JACOBS 1991).

Abb. 1:3-4) und typisch glockenbecherzeitlichen Armschutzplatten (Abb. 2) vor allem zahnstockverzierte Keramik (Abb. 3) und Zonenbecher (Abb. 1:1-2) berücksichtigt. Da die Zahnstocktechnik wohl grundsätzlich als ein von der Glockenbecherkultur übernommenes Zierelement gelten kann, wurden sämtliche derartig verzierte Scherben ohne Rücksicht auf bestimmte Muster aufgenommen, auch wenn einige in dieser Technik verzierte Gefäße auf Grund ihrer Form und der Musteranordnung mit Sicherheit der Einzelgrabkultur zuzuordnen sind (Abb. 4:1-2). Schwieriger war die Auswahl bei den zonenartig verzierten Bechern. Neben den eindeutig von der Glockenbecherkultur beeinflußten Zonenbechern, deren Verzierung sich über die gesamte Außenwandung des Gefäßes erstreckt, wurden teilweise auch wieder solche Gefäße berücksichtigt, deren Verzierung sich im typischen Stil der Einzelgrabkultur auf die obere Gefäßhälfte beschränkt. Hier wie auch bei einzelnen zonenartig verzierten Scherben wurden allerdings nur bestimmte Typen ausgewählt, beispielsweise solche mit metopenartigen Zierzonen oder mit durch ein Abschlußmuster nach oben und unten abgegrenzten Zierzonen. Dabei sollten sich verzierte und unverzierte Zonen möglichst abwechseln. Andere, durchaus auch als zonenartig anzusprechende Ornamente wie z.B. die Fischgrätenzier wurden als rein der Einzelgrabkultur zugehörig angesehen und somit für diese Arbeit nicht berücksichtigt. Im Zweifelsfall wurden Funde eher aussortiert als mit aufgenommen. Die letzte für diese Aufnahme berücksichtigte Fundgruppe stellen die gestielten Flintpfeilspitzen mit Dorn der Typen 5a und 5b nach KÜHN (1979, 68 Abb. 16) dar, die als einzige Pfeilspitzentypen ziemlich sicher der Glockenbecherkultur zuzuweisen sind (Abb. 5:2-3).

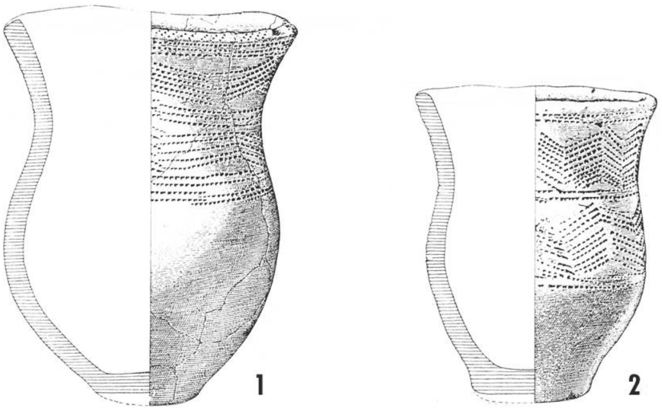

Abb. 4 1-2. Gaarzer Hof, Kr. Bad Doberan (nach JACOBS 1991).

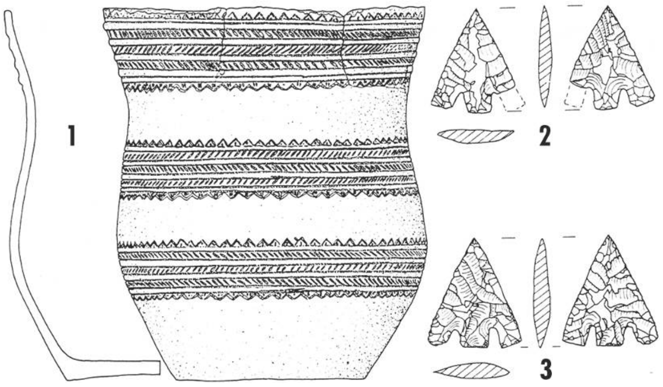

Abb. 5 Collinghorst, Kr. Leer (nach FUNDCHRONIK 1998).

Die Funde

Unter diesen Voraussetzungen konnten für Norddeutschland 254 Fundplätze mit Glockenbecherkultur bzw. Glockenbechereinfluß zusammengetragen werden. In gut der Hälfte der Fälle, nämlich 128, handelt es sich um Einzelfunde. Aber auch Gräber sind mit 87 Fundstellen häufig vertreten, wobei das Spektrum der Grabformen von Nachbestattungen in Großsteingräbern über Bestattungen in Hügelgräbern bis hin zu vereinzelten Flachgräbern reicht. Siedlungsstellen konnten nur in 26 Fällen nachgewiesen werden, dazu kommen noch zehn Fundstreuungen (Abb. 6).

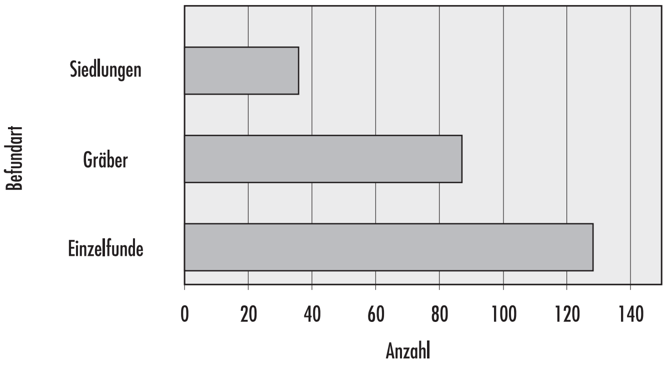

Abb. 6 Befunde der Glockenbecherkultur in Norddeutschland.

Bei den Funden überwiegt die Keramik (Abb. 7). Insgesamt wurden 193 Keramikfunde festgestellt, wobei das Auftreten von Gefäßen oder Scherben des-

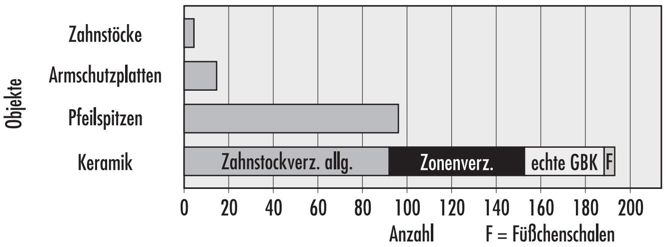

Abb. 7 Funde der Glockenbecherkultur in Norddeutschland.

selben Typs an einem Fundplatz jeweils nur einmal gezählt wurde. Diese Funde lassen sich aufgliedern in die mit 92 Fundkomplexen am häufigsten vorkommende zahnstockverzierte Keramik ohne eindeutige Glockenbechermotive, die zonenartig verzierte Keramik, die 61 mal nachgewiesen werden konnte und in den meisten Fällen der Glockenbecherkultur zuzuweisen sein dürfte, und die sicher als Glockenbecherkeramik anzusprechende Tonware, zu der insbesondere metopenartig verzierte Scherben und gedrungene Gefäße gezählt wurden. Zu dieser Kategorie konnten insgesamt 36 Funde gerechnet werden, wobei hier im Gegensatz zu den anderen Keramikgruppen die ganzen bzw. rekonstruierten Becher mit 26 Exemplaren – hinzu kommen noch vier Füßchenschalen – gegenüber den Scherben überwiegen, die nur an zehn Fundstellen vorkamen. Dies liegt vermutlich daran, daß auch unter den zonenartig und allgemein in Zahnstocktechnik verzierten Scherben zahlreiche Stücke sein dürfen, die zu einem Glockenbecher gehören, die aber als Bruchstück nicht aussagekräftig genug sind, um sie eindeutig der Glockenbecherkultur zuweisen zu können. Die zonenartig verzierte Keramik weist 17 ganze Gefäße und 38 Scherbenfunde auf. Dabei wurden die vollständigen Gefäße in die typischen Zonenbecher, die als echte Glockenbecher des Typs 2Ib nach niederländischer Tradition (Van Der Waals / Glasbergen 1955, 18 Abb.9) angesprochen werden können, und eine Gruppe von „Mischformen“ unterteilt. Zu letzteren wurden beispielsweise AOC- und AOO-Gefäße des Typs 2Ia/b gezählt, die typologisch zwar den Zonenbechern nahestehen, von ihrer ungegliederten, waagerecht umlaufenden Verzierung her jedoch nicht unter dem Begriff Zonenbecher gefaßt werden können. Auch Gefäße, die zwar eine zonenartige Verzierung, aber eine ungewöhnliche Gefäßform aufweisen, wurden in dieser Mischgruppe eingeordnet. Bei den Scherben war die Zuordnung zu den zonenartig verzierten Scherben einfacher. Hier wurden alle Stücke mit erkennbar zonaler Ornamentierung aufgenommen, die als der Glockenbecherkultur nahestehend eingeordnet werden konnten. Dabei überwiegen die zahnstockverzierten Scherben bei weitem – andere Techniken wie die Schnurverzierung konnten nur in Einzelfällen berücksichtigt werden, wenn beispielsweise eine flächig ausgefüllte Zone mit waagerecht umlaufenden Linien von einer unverzierten Fläche abgegrenzt war. Zu der Gruppe der zahnstockverzierten Keramik zählen zwar nur 16 vollständige Gefäße – die niedrigste Zahl von allen Keramikgruppen –, dafür aber 76 einzelne Scherben bzw. Scherbenkomplexe. Der Grund für diese große Differenz wird vermutlich darin liegen, daß, ähnlich wie im Fall der zonenartig verzierten Scherben, auch einige der hier angeführten Exemplare zu einem echten Glockenbecher gehören werden, dessen Muster jedoch auf den kleinen Bruchstücken nicht erkennbar ist. Außerdem wurden in dieser Gruppe auch diejenigen Scherben erfaßt, die in der vorliegenden Literatur nicht abgebildet oder näher beschrieben waren. Dagegen sind die allgemein als zahnstockverzierte Gefäße angesprochenen Becher im allgemeinen keiner der anderen Gruppen zuzuordnen, da sie als mit Sicherheit nicht zur Glockenbecherkultur gehörend, sondern nur als von ihr beeinflußt gelten können. Hierzu zählen vor allem einige Becher, die nur auf der oberen Hälfte und teilweise mit Mustern, die in Norddeutschland aus der Einzelgrabkultur bekannt sind, verziert sind. Hier wurde also offenbar die neue Ziertechnik übernommen; ansonsten blieb man aber dem eigenen Stil treu (Abb. 4:1-2).

Die zweitgrößte Fundgruppe nach der Keramik stellen die gestielten Flintpfeilspitzen dar. Von ihnen konnten 96 Stücke gezählt werden. Ihre sehr massive Verbreitung im Elb-Weser-Dreieck ist sicherlich großenteils auf die Forschungslage zurückzuführen, auf die später noch näher eingegangen wird.

Bemerkenswert ist das Auftreten von vierzehn Armschutzplatten in einem Gebiet, das bisher im allgemeinen nicht zum Verbreitungsgebiet der Glockenbecherkultur gezählt wird. Außerdem sei auf den Fund eines Zahnstockes hingewiesen.

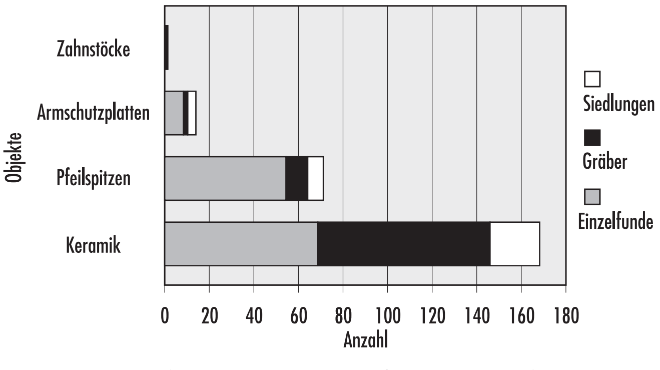

Abb. 8 Herkunft der Norddeutschen Glockenbecherfunde.

Die Keramik stammt überwiegend, nämlich in 68 Fällen, aus Gräbern (Abb. 8). Dies gilt besonders für die vollständigen Gefäße. So konnten aus Gräbern insgesamt 30 ganze Becher geborgen werden, darunter je 14 Glocken- und 14 Zonenbecher. Von den allgemein in Zahnstocktechnik verzierten Bechern stammen dagegen nur zwei aus einem nachweisbaren Grabzusammenhang. Den vollständigen Gefäßen stehen 25 Scherbenfunde aus Gräbern gegenüber, bei denen interessanterweise die nicht näher zuweisbaren zahnstockverzierten Exemplare überwiegen. Bei den Einzelfunden zeigt sich ein deutlich entgegengesetztes Bild: Hier überwiegen die Scherbenfunde deutlich. Von insgesamt 62 Einzelfunden sind nur etwa ein Sechstel, nämlich elf Stück, ganze Gefäße. Dabei handelt es sich um zwei allgemein zahnstockverzierte Gefäße (bei 34 Scherbenfunden) und einen Zonenbecher (bei 14 Scherben), bemerkenswerterweise aber acht Glockenbecher (bei nur einer Scherbe). Möglicherweise handelt es sich hierbei zu einem größeren Teil als bei den übrigen Keramikgruppen um Grabfunde, die nicht als solche erkannt worden sind, beispielsweise aus Flachgräbern. Dies würde darauf hindeuten, daß mit der Glockenbecherkeramik teilweise auch eine besondere Bestattungsweise verbunden war, was zumindest bedingt für die Anwesenheit von seßhaft gewordenen Glockenbecherleuten in Norddeutschland sprechen würde. Unter den Siedlungsfunden fand sich kein einziger vollständiger Becher. Es konnten insgesamt nur 20 Scherbenfunde festgestellt werden, von denen 15 allgemein in Zahnstocktechnik und fünf zonenverziert sind. Echte Glockenbecherscherben ließen sich nach derzeitigem Forschungsstand von keiner norddeutschen Siedlung oder Fundstreuung nachweisen.

Ein eindeutiges Bild ergibt sich bei den gestielten Flintpfeilspitzen, die von 64 Fundstellen stammen. Dabei handelt es sich um 50 Einzelfunde, achtmal konnten gestielte Pfeilspitzen in Gräbern und sechsmal in Siedlungen und Fundstreuungen nachgewiesen werden.

Auch die Armschutzplatten wurden ganz überwiegend – nämlich in neun Fällen – als Einzelfunde geborgen. Drei Armschutzplatten wurden in Siedlungen gefunden, und zwei Exemplare stammen aus Gräbern. Der Zahnstock ist ein Einzelfund.

Nur in wenigen Fällen fanden sich mehrere unterschiedliche der Glockenbecherkultur zuzuordnende Funde zusammen auf demselben Fundplatz. Dabei handelt es sich meist um Kombinationen der unterschiedlichen Keramikgruppen oder um Zusammenfunde von Glockenbecherkeramik im weiteren Sinne mit gestielten Flintpfeilspitzen (vgl. Abb. 5). Zehn solcher Fundkombinationen stammen von Siedlungen, acht aus Gräbern, und in zwei Fällen handelt es sich um Einzelfunde.

In dem eindeutig der Glockenbecherkultur zuzuweisenden Grab von Neerstedt, Kr. Oldenburg (Stegen 1942, 52ff.) fanden sich ein Zonenbecher, weitere zahnstockverzierte Keramik, eine gestielte Flintpfeilspitze und eine Armschutzplatte. Hinzu kommen auch noch einige Bernsteinperlen (Abb. 9). Bedauerlicherweise ist die sichere Zuweisung aller Funde zu einem Grab jedoch nicht gegeben.

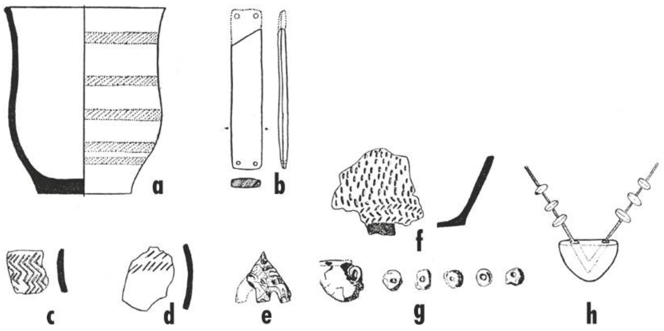

Abb. 9 Neerstedt, Kr. Oldenburg (nach Stegen 1942).

Verbreitung der Glockenbecherkultur in Norddeutschland

Ein Blick auf die Verbreitungskarte der Glockenbecherfunde in Norddeutschland (Abb. 10) zeigt zunächst den unterschiedlichen Forschungsstand in den verschiedenen Regionen dieses Gebietes. Eine dichte, flächige Fundverteilung läßt sich nur für das Elb-Weser-Dreieck feststellen. Dieses Bild ist in erster Linie der umfangreichen Materialaufnahme von E. Strahl (1990) zu verdanken. Die Fundhäufung im Nordosten Hamburgs geht vor allem auf die Fundplätze von Hamburg-Boberg zurück, die besonders reich an steinzeitlichem Fundmaterial sind und bereits am Anfang des 20. Jahrhunderts von vielen Privatsammlern abgesucht wurden (vgl. Mertens 2003). In Schleswig-Holstein und Mecklenburg-Vorpommern erscheinen die glockenbecherzeitlichen Fundplätze eher locker gestreut. Während die letzte umfassende Arbeit zum Endneolithikum in Schleswig-Holstein jedoch bereits über 50 Jahre alt ist (Struve 1955), so daß forschungsbedingte Lücken wahrscheinlich sind, liegt für Mecklenburg-Vorpommern eine Materialaufnahme erst aus jüngerer Zeit vor (Jacobs 1991). Hier werden die Fundlücken also möglicherweise nicht allein mit dem Forschungsstand zu erklären sein. Fundhäufungen zwischen Warnow und Recknitz sowie westlich der Oder mögen die Tätigkeit bestimmter Privatsammler widerspiegeln; vielleicht fanden die Menschen im Endneolithikum hier aber auch besonders geeignete Siedlungsbedingungen vor. Besonders auffällig ist die

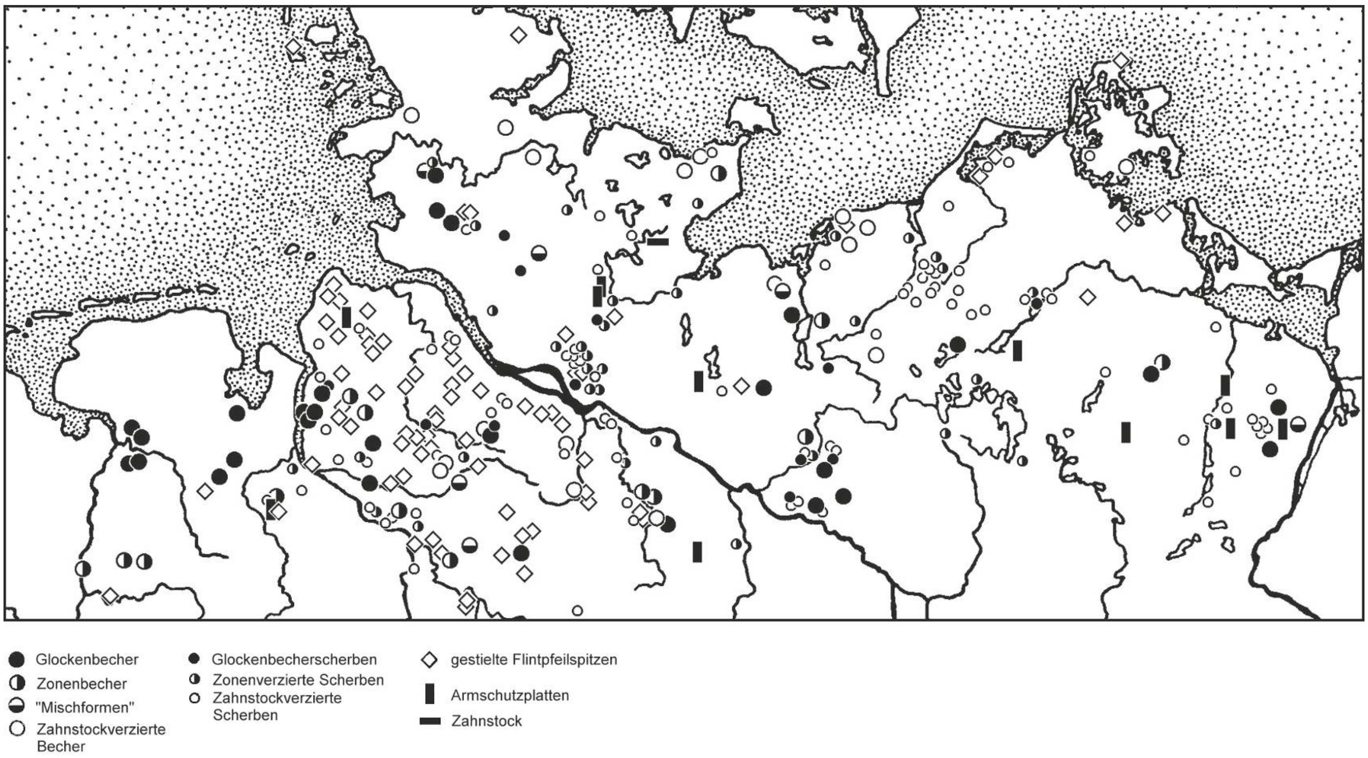

Abb. 10 Verbreitung der Glockenbecherkultur in Norddeutschland.

geringe Funddichte in Nordwestdeutschland zwischen Weser und Ems. Eine Bearbeitung des Endneolithikums in diesem Gebiet steht bisher noch aus.

Die echten Glockenbecherfunde sind ebenso wie die von der Glockenbecherkultur beeinflußten Funde in ganz Norddeutschland verbreitet. Auf den ersten Blick besonders auffällig ist die deutliche Fundhäufung im Gebiet zwischen Elbe und Weser. Es handelt sich hierbei vor allem um zahlreiche gestielte Flintpfeilspitzen, die vereinzelt in ganz Norddeutschland, aber nirgendwo auch nur annähernd so massiv wie hier auftreten. Sicherlich ist diese Konzentration von Pfeilspitzen in diesem Gebiet zumindest teilweise forschungsgeschichtlich mit einer regen Sammeltätigkeit und der sehr ausführlichen Publikation von E. Strahl (1990) zu erklären. Allerdings scheinen in Mecklenburg-Vorpommern trotz der vergleichbar umfangreichen Materialaufnahme von J. Jacobs (1991) gestielte Flintpfeilspitzen kaum vorzukommen. Somit könnte die Häufung dieser Fundgruppe im Elb-Weser-Dreieck auch noch andere Gründe haben. Will man eine besonders intensive Jagdtätigkeit in diesem Gebiet ausschließen, so läßt sich nur vermuten, daß die Pfeilspitzen als besondere Modeerscheinung regen Anklang bei der ansässigen Bevölkerung fanden oder ein Handwerker oder Händler in dieser Region sich besonders der Verbreitung dieser Pfeilspitzen widmete. Für eine nicht rein forschungsgeschichtliche Erklärung spräche auch, daß für den nordostnierdersächsischen Raum derzeit ebenfalls nur ein Bruchteil der im Elb-Weser-Dreieck gefundenen Flintpfeilspitzen nachgewiesen werden kann[1].

Der Massierung von Pfeilspitzen im Westen steht eine nicht ganz so augenfällige Häufung von allgemein zahnstockverzierten Scherben im östlichen Norddeutschland gegenüber. Auch dies spricht gegen eine rein forschungsgeschichtliche Erklärung. Denn da entsprechende Scherben in dem gut untersuchten Gebiet zwischen Elbe und Weser in deutlich geringerer Menge vorkommen, kann hier mit Sicherheit von einem im Endneolithikum vorhandenen besonderen Schwerpunkt im Fundspektrum Nordostdeutschlands ausgegangen werden.

Ein Blick auf die Funde der echten Glockenbecherkultur – also auf Becher, Scherben und Armschutzplatten – zeigt deren Verbreitung besonders im nordwestdeutschen Raum zwischen Ems und Weser. Hier macht sich vermutlich die unmittelbare Nähe zum Verbreitungsgebiet der niederländischen Glockenbecherkultur bemerkbar. Um so bedauerlicher ist es, daß gerade das Weser-Ems-Gebiet bisher so schlecht publiziert ist. Aber auch so findet sich ein großer Teil der echten Glockenbecherfunde Norddeutschlands in dieser Region, wobei die Nähe zu den großen Flüssen Ems und Weser augenfällig ist. Im übrigen Norddeutschland sind Glockenbecher weitgehend regellos verbreitet. Kleinere Häufungen finden sich an der Westküste Schleswig-Holsteins und im Gebiet zwischen Elbe und Elde. Zu erwähnen ist noch die Verbreitung der Armschutzplatten. Sie finden sich im gesamten Norddeutschland, treten aber besonders gehäuft im Osten Mecklenburg-Vorpommerns auf. Auch im übrigen Mecklenburg-Vorpommern und im östlichen Schleswig-Holstein sind sie vertreten. Dagegen finden sich südlich der Elbe nur eine Armschutzplatte in Nordostniedersachsen und eine im Elb-Weser-Dreieck in Nordseenähe. Das gehäufte Auftreten von Armschutzplatten wird kaum mit der Übernahme der als charakteristisch für die Glockenbecherkultur angesehenen Bogenjagd zu tun haben, da die dazugehörigen Pfeilspitzen sich weitgehend außerhalb des Verbreitungsgebietes der Armschutzplatten fanden. Möglicherweise könnten die Armschutzplatten statt dessen durch Händler ins Land gekommen und von der einheimischen Bevölkerung als besonderer Schmuck getragen worden sein.

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[1] Verf. Arbeitet derzeit an einer Dissertation über „Das Endneolithikum zwischen Elbe und Ilmenau“. Im Rahmen der bisherigen Materialaufnahme konnten gestielte Flintpfeilspitzen nur vereinzelt festgestellt werden. Dies kann sicherlich nicht ausschließlich auf eine möglicherweise weniger intensive Sammlungstätigkeit bzw. Dokumentation der Funde zurückgeführt werden.

Schlußbemerkung

Abschließend ist festzuhalten, daß die Glockenbecherkultur in Norddeutschland so weit verbreitet ist, daß eine absolute Grenze dieser Kultur hier nicht zu fassen ist – dafür spricht auch das Auftreten von Glockenbecherkultur in Dänemark noch weiter im Norden. Gerade in Nordwestdeutschland findet sich bis zur Weser hin soviel echte Glockenbecherkultur, daß man keineswegs nur von einer Beeinflussung sprechen kann. Dabei zeigen sich engste Verbindungen mit der niederländischen Glockenbecherkultur. Leider verhindert der unzureichende Forschungsstand gerade in diesem Gebiet weitergehende Aussagen. Vielleicht ließe sich sonst tatsächlich eine Ausweitung der niederländischen Glockenbecherkultur bis an die Weser nachweisen.

Etwas weniger eindeutig ist die Situation östlich der Weser. Die Zahl echter Glockenbecher ist hier deutlich geringer; es finden sich aber dennoch so viele der Glockenbecherkultur zuzurechnende Hinterlassenschaften – allen voran mehrere Armschutzplatten, die einen besonderen Verbreitungsschwerpunkt in Nordostdeutschland haben –, daß letztlich ganz Norddeutschland noch als zum Verbreitungsgebiet der Glockenbecherkultur gehörig angesprochen werden kann. Zahlreiche im Stil der Glockenbecherkultur in Zahnstocktechnik verzierte Einzelgrabbecher zeigen darüber hinaus, wie eng die Kontakte zwischen der von außen kommenden Glockenbecherkultur und der einheimischen Einzelgrabkultur waren.

Im Gegensatz zu vielen anderen Gebieten in Europa scheint sich die Glockenbecherkultur in Norddeutschland jedoch nie völlig gegen die Einzelgrabkultur durchgesetzt zu haben.

LITERATUR

Andersen H.H. / Bauch W. / Bokelmann K. / Clausen I. / Feiler-Kramer A. / Hartz S. / Hoika J. / Kühn H.J. / Schirren C.M. / Saggau H.E. / Zich B. 1996. Zehnter Arbeitsbericht des Landesamtes für Vor- und Frühgeschichte von Schleswig-Holstein. Grabungsberichte der Jahre 1988-1993. *Offa* 53, 371-479.

Arnold V. 1971. Steinbronzezeitliche Siedlungsreste auf dem „Tegelbarg“, Gemeinde Quern-Neukirchen, Kr. Flensburg. *Offa* 28, 94-95.

Bauch W. / Bauch W. / Clausen I. / Kramer W. / Kühn H.J. 1990. Siebenter Arbeitsbericht des Landesamtes für Vor- und Frühgeschichte von Schleswig-Holstein. Grabungsberichte der Jahre 1980-1981. *Offa* 47, 421-467.

Bauch W. / Bauch W. / Clausen I. / Kramer W. / Kühn H.J. 1991. Achter Arbeitsbericht des Landesamtes für Vor- und Frühgeschichte von Schleswig-Holstein. Grabungsberichte der Jahre 1982-1983. *Offa* 48, 381-434.

Bauch W. / Bokelmann K. / Clausen I. / Jöns H. / Kramer W. / Kühn H.J. / Saggau H.E. / Zich B. 1994. Neunter Arbeitsbericht des Landesamtes für Vor- und Frühgeschichte von Schleswig-Holstein. Grabungsberichte der Jahre 1984-1987. *Offa* 51, 191-248.

Baumann G.E.H. 1963. Steinzeitliche Siedlungsfunde auf dem Gallberg bei Himmelsthür, Kr. Hildesheim-Marienburg. *Nachrichten aus Niedersachsens Urgeschichte* 32, 73-78.

Deichmüller J. 1974. Ein Glockenbechergrab bei Wallhöfen, Gemeinde Vollersode, Kr. Osterholz. *Die Kunde* N.F. 25, 53-69.

Fundberichte 1994. Kurze Fundberichte 1994. *Bodendenkmalpflege in Mecklenburg-Vorpommern* 1994 (1995), 219-385.

Fundchronik 1995. J.J. Assendorp, E. Cosack, J. Eckert, M. Geschwinde u. J. Möller, Fundchronik Niedersachsen 1994. *Nachrichten aus Niedersachsens Urgeschichte* 64,2, 201-485.

FUNDCHRONIK 1996. G. Almeling u.a., Fundchronik Niedersachsen 1995. *Nachrichten aus Niedersachsens Urgeschichte* 65,2, 241-470.

FUNDCHRONIK 1997. J.J. Assendorp, E. Cosack, J. Eckert, M. Geschwinde u. J. Möller, Fundchronik Niedersachsen 1996. *Nachrichten aus Niedersachsens Urgeschichte* 66,2, 347-580.

FUNDCHRONIK 1998. J. Möller (Hrsg.), Fundchronik Niedersachsen 1997. *Nachrichten aus Niedersachsens Urgeschichte*, Beih.1.

FUNDCHRONIK 2000. J. Möller (Hrsg.), Fundchronik Niedersachsen 1999. *Nachrichten aus Niedersachsens Urgeschichte*, Beih.4.

FUNDCHRONIK 2001. J. Möller (Hrsg.), Fundchronik Niedersachsen 2000. *Nachrichten aus Niedersachsens Urgeschichte*, Beih.6.

GENRICH A. 1938. Die Untersuchung eines Einzelgrabhügels von Osterbrock, Kr. Meppen. *Nachrichten aus Niedersachsens Urgeschichte* 12, 1938, 44-51.

JACOBS J. 1991. *Die Einzelgrabkultur in Mecklenburg-Vorpommern*. Beiträge zur Ur- und Frühgeschichte in Mecklenburg-Vorpommern 24. Schwerin.

KONCZAK R. 1998. Einsatzstücke aus Silexabschlägen – ein Gerätetyp des Spätneolithikums. *Archäologische Berichte aus Mecklenburg-Vorpommern* 5, 30-40.

KÖRNER G. 1959. Der bronzezeitliche Mehrperiodenhügel bei Deutsch-Evern im Landkreis Lüneburg. *Nachrichten aus Niedersachsens Urgeschichte* 28, 1959, 3-19.

KÖRNER G. / LAUX F. 1980. *Ein Königreich an der Luhe*. Lüneburg.

KRÜGER F. 1926. Steinzeitliche Keramik im Museum zu Lüneburg. *Nachrichtenblatt aus Niedersachsens Vorgeschichte* N.F. 3, 24-41.

KÜHN H.-J. 1979. *Das Spätneolithikum in Schleswig-Holstein*. Offa-Bücher 40. Neumünster.

MERTENS K. 2003. Ein Siedlungsplatz der Glockenbecherkultur in Hamburg-Boberg? In: CZEBRESZUK J. / SZMYT M. (eds.), *The Northeast Frontier of Bell Beakers*, in diesem Band.

MÜLLER-KARPE H. 1974. *Handbuch der Vorgeschichte. B. 3. Kupferzeit*. München.

NELSON H. 2001. Spätneolithische Keramikfunde aus dem Landkreis Celle. *Nachrichten aus Niedersachsens Urgeschichte* 70, 189-210.

PÄTZOLD J. 1954. Ein reichhaltiger Grabhügel der Einzelgrabkultur von der Kakenbäker Heide bei Wildeshausen und weitere oldenburgische Keramikfunde der Becherkulturen. *Oldenburger Jahrbuch* 54/2, 3-26.

PETERS H.-G. 1974. Ein spätneolithisches Gefäß aus Laatzen-Grasdorf, Kr. Hannover. *Nachrichten aus Niedersachsens Urgeschichte* 43, 104.

PREUSS J. (Hrsg.) 1998. *Das Neolithikum in Mitteleuropa. Kulturen – Wirtschaft – Umwelt vom 6. bis 3. Jahrtausend v.u.Z. Übersichten zum Stand der Forschung. Bd.1/2, Teil B: Übersichten zum Stand und zu Problemen der archäologischen Forschung*. Weißbach.

PREUSS J. (Hrsg.) 1999. *Das Neolithikum in Mitteleuropa. Kulturen – Wirtschaft – Umwelt vom 6. bis 3. Jahrtausend v.u.Z. Übersichten zum Stand der Forschung. Bd.2, Teil C: Kulturenübersicht. Literatur-, Tafel- und Beilagenverzeichnis. Tafelbearbeiter, Fototafeln*. Weißbach.

RASSMANN K. 1993. *Spätneolithikum und frühe Bronzezeit im Flachland zwischen Elbe und Oder*. Beiträge zur Ur- und Frühgeschichte in Mecklenburg-Vorpommern 28. Lübstorf.

SCHINDLER R. 1960. *Die Bodenfunde der Freien und Hansestadt Hamburg*. Veröffentlichungen des Museums für Hamburgische Geschichte, Abt. Bodendenkmalpflege, 1. Hamburg.

SCHLICHT E. 1958. Die Untersuchung eines Grabhügels bei Wehm, Kreis Aschendorf-Hümmling. *Die Kunde* N.F. 9, 135-142.

SCHÜNEMANN D. 1974. Die Einzelgrabkultur und die Glockenbecherkultur im Kreis Verden. *Nachrichten aus Niedersachsens Urgeschichte* 43, 1-46.

STEGEN K. 1942. Die Glockenbecherkultur in Nordwestdeutschland. *Nachrichten aus Niedersachsens Urgeschichte* 16, 46-65.

STRAHL E. 1990. *Das Endneolithikum im Elb-Weser-Dreieck*. Teil 1-3. Veröffentlichungen der urgeschichtlichen Sammlungen des Landesmuseums zu Hannover 36. Hildesheim.

STRUVE K.W. 1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen*. Offa-Bücher 11. Neumünster.

TEMPEL W.-D. 1978. Bericht über die Ausgrabung des Megalithgrabes I in Ostenwalde, Gemeinde Werlte, Kreis Aschendorf-Hümmling. *Neue Ausgrabungen und Forschungen in Niedersachsen* 12, 1-31.

VAN DER WAALS J.D. / GLASBERGEN W. 1955. Beaker Types and Their Distribution in the Netherlands. *Palaeohistoria* 4, 5-47.

Anhang

Schleswig-Holstein

1. **Aasbüttel**, Kr. Steinburg.
Grabhügel, Grab 5.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16). *Aus demselben Grab stammen noch ein Flintdolch und eine Scherbe der Trichterbecherkultur. Die Zuordnung zu diesem Grab ist bei Pfeilspitze und Scherbe allerdings unsicher.*
LM Schleswig K.S. 6753b.
KÜHN 1979, 107f. Kat.-Nr.78.

2. **Aasbüttel**, Kr. Steinburg.
Grabhügel, Grab 6.
In Furchenstichtechnik verzierte Füßchenschale. *Aus demselben Grab stammen eine Pfeilspitze und vier Flintstückchen.*
Verbleib?
STRUVE 1955, 170 Kat.-Nr.522, Taf.20,11.

3. **Aasbüttel**, Kr. Rendsburg.
Siedlungsstelle.
Wohnplatz I: Zonenartig in Zahnstocktechnik verzierte Glockenbecherscherbe. Gestielte Flintpfeilspitze Typ 5a/b nach KÜHN (1979, 68 Abb.16). *Von demselben Wohnplatz stammt eine jütländische Streitaxt.*
Wohnplatz II: Zonenartig in Kreuzschraffurtechnik verzierte Scherbe. *Von derselben Wohnstelle stammen mehrere Scherben und eine Pfeilspitzenvorarbeit.*
LM Schleswig K.S. 7013, 7045.
STRUVE 1955, 170f. Kat.-Nr.532, Taf.12,9.

4. **Bad Bramstedt**, Kr. Segeberg.
Grabfund, Flachgrab (?).
Zonenartig in Zahnstocktechnik verzierter Glockenbecher. Zahnstockverzierte Scherben.
LM Schleswig K.S. 9709a-b.
STRUVE 1955, 179 Kat.-Nr.715, Taf.20,2 u. 20,5.

5. **Bad Oldesloe**, Kr. Stormarn.
Einzelfund.
Zonenartig in Schnurtechnik verziertes Becherfragment.
Priv.-Bes.
STRUVE 1955, 184 Kat.-Nr.824, Taf.21,13.

6. **Börnsen**, Kr. Hzgtm. Lauenburg.
Siedlungsplatz der Trichterbecher-, Einzelgrab- und Glockenbecherkultur.
Zonenartig in Zahnstock- und Kreuzschnittechnik verzierte Scherben. *Von demselben Platz stammen mehrere Flintartefakte, Flintbeilfragmente sowie ein Zapfenkeil.*
Verbleib?
STRUVE 1955, 160 Kat.-Nr.263, Taf.22.

7. **Bovenau**, Kr. Rendsburg-Eckernförde.
Grabhügel mit Steinkammer.
In Zahnstock- und Schnurtechnik verzierter Becher. *Aus der Kammer stammt noch ein Flintdolch.*
LM Schleswig K.S. A 1a.
KÜHN 1979, 109 Kat.-Nr.87.

8. **Damlos**, Kr. Ostholstein
Bestattung in Steinkammer.
Zonenartig in Kammstrichtechnik verziertes glockenbecherähnliches Gefäß. *Aus der Kammer stammen noch ein Querbeil und mehrere Pfeilspitzen.*
LM Schleswig K.S. 12185a (?).
STRUVE 1955, 165 Kat.-Nr.390, Taf.20,3.

9. **Großenbornholt**, Kr. Rendsburg-Eckernförde.
Grabhügel, Bestattung II (Bodengrab).
Zonenartig in Zahnstocktechnik verzierter Glockenbecher. *Zur selben Bestattung gehören eine jütländische Streitaxt Typ K1, zwei Bernsteinperlen, ein Flintspan und ein Mahlstein.*
LM Schleswig K.S. KWK 21/23.
STRUVE 1955, 173f. Kat.-Nr.578, Taf.21,6.

10. **Großharrie**, Kr. Plön.
Einzelfund (?).
Zonenartig in Zahnstocktechnik verzierte Scherbe.
KÜHN 1979, Taf.11,14.

11. **Heidmoor**, Kr. Segeberg.
Einzelfund (?).
Glockenbecher.
KÜHN 1979, 91.

12. **Klaushorst**, Gde. Altenkrempe, Kr. Ostholstein.
Siedlungs- oder Grabfund?
Zonenartig in Zahnstocktechnik verzierte Scherben von zwei Glockenbechern.
Mus. Neustadt i.H.
STRUVE 1955, 166 Kat.-Nr.414.

13. **Klein-Wesenberg**, Kr. Stormarn.
Einzelfund (?).
Zonenartig in Zahnstocktechnik verzierte Scherben.
KÜHN 1979, 91, Taf.11,10-12.

14. **Kruck**, Gde. Raa-Besenbeck, Kr. Pinneberg.
Einzelfund (?).
Zonenartig in Zahnstocktechnik verziertes Becherfragment. *Von derselben Fundstelle stammt noch eine Flintsichel.*
LM Schleswig K.S. 14541.
KÜHN 1979, 106 Kat.-Nr.64, Taf.18,2.

15. **Leezen**, Kr. Segeberg.
Einzelfund (?).
In Zahnstocktechnik verzierte Scherbe.
KÜHN 1979, Taf.11,13.

16. **Lockstedter Lager**, Kr. Steinburg.
Grabhügel, Bestattung I (Untergrab).
Zonenartig in Zahnstocktechnik verzierter Glockenbecher. *Aus demselben Grab stammen ein Flintbeil, ein Flintspan und eine Schale.*
LM Schleswig K.S. 10219d.
STRUVE 1955, 183 Kat.-Nr.801, Taf.20,13.

17. **Neversdorf**, Kr. Segeberg.
Einzelfund.
Armschutzplatte.
Priv.-Bes.
STRUVE 1955, 180 Kat.-Nr.745.

18. **Norddorf/Amrum** LA 28, Kr. Nordfriesland. Mbl. 1316, R. ^{34}57400, H. ^{60}60460.
Nachbestattung (?) in Megalithgrab.
Vier gestielte Flintpfeilspitzen Typ 5a/b nach KÜHN (1979, 68 Abb.16).
BAUCH u.a. 1994, 229 Abb.25,1-4.

19. **Putlos**, Gde. Oldenburg, Kr. Ostholstein.
Nachbestattung in Steingrab.
In Zahnstocktechnik verzierter Becher. *Aus den Nachbestattungen stammen noch 13 Flintbeile und –meißel, eine Bernsteinperle, eine Flintpfeilspitze, ein Flintdolch, sowie eine Schale und ein Napf.*
LM Schleswig K.S. 1933.
KÜHN 1979, 106 Kat.-Nr.62.

20. **Putlos**, Gde. Oldenburg, Kr. Ostholstein.
Bestattung in Steingrab.
Zonenartig verzierte Scherben.
LM Schleswig K.S. 9705a-b.
STRUVE 1955, 166 Kat.-Nr.428, Taf.20,1.

21. **Quern-Neukirchen**, Kr. Schleswig-Flensburg „Tegelbarg“.
Siedlungsstelle.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16). *Von derselben Siedlung stammen zahlreiche uncharakteristische Scherben, ein Flintdolchfragment, mehrere Flintpfeilspitzen, das Fragment einer Felsgesteinaxt sowie weitere Flintartefakte.*
Verbleib?
ARNOLD 1971, 94, Abb.8,11.

22. **Ramsdorf**, Gde. Owschlag, Kr. Rendsburg-Eckernförde.
Rundhügel, erweiterter Dolmen.
In Zahnstocktechnik mit Fischgrätenmuster verzierter Becher. *Aus demselben Hügel stammt ein dicknackiges Flintbeil.*
LM Schleswig A 1467.
KÜHN 1979, 99 Kat.-Nr.8.

23. **Rantrum**, Kr. Nordfriesland.
Nachbestattungen in Megalithgrab.
In Ritztechnik mit Kreuzschraffur verzierte Scherbe. Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
BAUCH u.a. 1990, 423ff., Abb.3,14 u. 3,25.

24. **Schalkholz**, Kr. Dithmarschen.
Grabhügel mit zerstörter Steinkammer, Nachbestattung der Einzelgrabkultur.
Mit Rillenbündeln verzierter gedrungener Becher. Zonenartig in Riefen- und Einzeleinstichtechnik verzierte Scherbe. *Zu derselben Bestattung gehören drei weitere Becher der Einzelgrabkultur, mehrere Flintdolche und weitere Flintartefakte.*
LM Schleswig K.S. 18234b-c.
KÜHN 1979, 105 Kat.-Nr.56, Taf.11,3-4.

25. **Schalkholz**, Kr. Dithmarschen.
Einzelfunde.
Kleiner schlanker Glockenbecher, in Zahnstock- und Schnittechnik zonenartig verziert. *Von derselben Fundstelle stammt ein Riesenbecher.*
Mus. Heide.
STRUVE 1955, 164 Kat.-Nr.373, Taf.21,11.

26. **Seedorf** LA 246 „Heidmoor“, Kr. Segeberg. Mbl. 1929, R. ^{44}02500, H. ^{59}90650.
Mehrperiodige Siedlungsstelle.
Drei in Zahnstocktechnik verzierte Scherben, wohl von einem Gefäß. *Von derselben Fundstelle stammen weitere verzierte und unverzierte Scherben, eine Kugelamphore, Flintbeile, große Mengen an kleineren Flintartefakten, Knochengeräte sowie zwei Bernsteinperlen.*
ANDERSEN u.a. 1996, 418, Abb.40,16.

27. **Steinkreuz**, Gde. Travenhorst, Kr. Segeberg.
Einzelfund. Baggerfund aus der Trave.
Zahnstock aus Knochen.
LM Schleswig K.S. 16198.
STRUVE 1955, 181 Kat.-Nr.763, Taf.20,9.

28. **Tralau**, Kr. Stormarn.
Einzelfund (?).
Armschutzplatte.
KÜHN 1979, 92.

29. **Wangels** (Grammdorf) LA 412, Kr. Ostholstein. Mbl.1731, R. ^{44}24060, H. ^{60}15520.
Nachbestattung (?) in Megalithgrab.
In Zahnstocktechnik verzierter EinzelgrAbbecher. *Aus demselben Zusammenhang stammen eine unverzierte Scherbe, drei Flintbeile, ein Flintdolchfragment (unsicher), zahlreiche Flintpfeilspitzen, eine Bernsteinperle sowie weitere Flint- und Felsgesteinartefakte.*
BAUCH u.a. 1991, 400, Abb.18,2.12.15.17.

30. **Wolkenwehe**, Gde. Oldesloe, Kr. Stormarn.
Mehrperiodige Siedlungsstelle der Trichterbecherkultur, Einzelgrabkultur und Glockenbecherkultur.
Zonenartig in Kammstempel-, Kreuzschraffur-, Schnitt- und Zahnstocktechnik verzierte Scherbe. Scherbe mit Metopenverzierung. Gestielte Flintpfeilspitzen Typ 5a/b nach KÜHN (1979, 68 Abb.16). *Von derselben Fundstelle stammen zahlreiche weitere verzierte Scherben der Trichterbecher- und Einzelgrabkultur, Flintbeile und andere Flintartefakte.*
Verbleib? (LM Schleswig?)
STRUVE 1955, 187 Kat.-Nr.893.

31. **O.F.**, Kr. Htgtm. Lauenburg
Einzelfund.
Becherscherbe mit waagerecht umlaufenden Rillen, dazwischen Zonenband mit Kreuzschraffur in Schnittechnik.
LM Schleswig K.S. 17175.
STRUVE 1955, 162 Kat.-Nr.309.

Hamburg

32. **Bergedorf** Fpl.7 „Gojenberg“
Siedlung.
Zonenbecherfragment. *Von derselben Fundstelle stammen noch Scherben der Trichterbecherkultur und Flintartefakte.*
Helms-Museum MHG 1948:258.
SCHINDLER 1960, 63.

33. **Boberg** o.Nr.
Einzelfunde.
Zwei gestielte Flintpfeilspitzen.
Priv.-Bes. Sonder, Oldesloe (oder Helms-Museum, MHG?)
SCHINDLER 1960, 78.

34. **Boberg** o.Nr.
Einzelfunde.
Scherben eines Zonenbechers. *Von möglicherweise derselben Fundstelle stammen weitere Scherben und Flintartefakte.*
Helms-Museum AM 1934:47,1-10.
SCHINDLER 1960, 78.

35. **Boberg** o.Nr.
Einzelfund.
Gestielte Flintpfeilspitze.
Mus. Bergedorf?
SCHINDLER 1960, 79.

36. **Boberg** Fpl.12.
Siedlung.
Zonenbecherscherben, in Zahnstocktechnik verzierte Scherben. *Von demselben Siedlungsplatz stammen weitere Scherben und Flintartefakte.*
Helms-Museum MHG 1951,1-2 (?).
SCHINDLER 1960, 84.

37. Boberg Fpl.15.
Siedlung.
In Zahnstocktechnik verzierte Scherben. *Von derselben Siedlung stammen weitere Scherben und Gefäße der Trichterbecher- und Ertebøllekultur, Flintbeilfragmente, Mahl- und Schleifsteine sowie zahlreiche kleine Flintartefakte.*
Helms-Museum MHG (?).
SCHINDLER 1960, 85.

38. Boberg Fpl.27.
Siedlung.
In Zahnstocktechnik verzierte Scherben. *Von derselben Siedlungsstelle stammen weitere Scherben, Flintpfeilspitzen und Flintartefakte.*
Helms-Museum MHG 1952:130-131.
SCHINDLER 1960, 87, Taf.73,1.

39. Boberg Fpl.29.
Siedlung.
In Zahnstocktechnik verzierte Scherben. *Von derselben Siedlungsstelle stammen weitere Scherben und Flintartefakte.*
Helms-Museum MHG 1952:58 (?).
SCHINDLER 1960, 87.

40. Boberg Fpl.30.
Siedlung.
Zonenartig verzierte Scherben; in Zahnstocktechnik verzierte Scherben; gestielte Flintpfeilspitzen. *Von derselben Siedlungsstelle stammen weitere Scherben sowie zahlreiche Flintartefakte.*
Helms-Museum MHG 1952:122, MfV 1896:235-239, K.S. 21661.
SCHINDLER 1960, 88f.

41. Duvenstedt Fpl.11.
Einzelfund.
Gestielte Flintpfeilspitze.
Priv.-Bes. Reher.
SCHINDLER 1960, 119 Taf.20,1.

42. Lohbrügge Fpl.8 „Sande“, „Heckkathen“.
Urnenfriedhof Grab 8.
In Zahnstocktechnik verzierter Becher.
Helms-Museum MfV 1895:125.
SCHINDLER 1960, 172, Taf.87,5, Abb.63,1.

43. Lohbrügge Fpl.14.
Grabhügel „Heidkamp“.
„Zonenbecherkeramik“. *Aus demselben Grabhügel stammen eine Felsgesteinaxt und ein dicknackiges Flintbeil. Alle genannten Objekte gehören zu einer Gruppe älterer Funde.*
Helms-Museum MHG 1952:110 (?).
SCHINDLER 1960, 174.

44. Sasel Fpl.1-4.
Siedlung.
Zonenartig verzierte Scherbe. *Von derselben Siedlungsstelle stammen noch weitere Scherben und Flintartefakte.*
Helms-Museum MHG 1951:21 (?).
SCHINDLER 1960, 238f.

Mecklenburg-Vorpommern und nördliches Brandenburg

45. Battin, OT von Grünberg, Kr. Uckermark.
Einzelfunde (?).
Fragment einer Armschutzplatte.
Schule Torgelow 170 (verloren).
JACOBS 1991, 74f. Kat.-Nr.689,6; Taf.18,12.

46. Beiershagen, OT von Langenhamm, Kr. Ribnitz-Dammgarten.
Einzelfund (?).
Gestielte Flintpfeilspitze.
Mus. Stralsund 7085.
JACOBS 1991, 41 Kat.-Nr.17,2; Taf.62,34.

47. Beseritz, Kr. Mecklenburg-Strelitz.
Megalithgrab.
Zonenbecher.
Mus.-Depot Neustrelitz (verloren).
RASSMANN 1993, 123 Kat.-Nr.70.

48. Biendorf, OT von Gersdorf, Kr. Bad Doberan.
Einzelfunde (?).
In Zahnstocktechnik verzierter Becher. Gestielte Flintpfeilspitze.
Mus. Schwerin 132; o.Nr.
JACOBS 1991, 41 Kat.-Nr.19,1+2; Taf.18,2 (Becher).

49. Bobzin, Kr. Ludwigslust.
Flachgrab.
Zonenartig in Kreuzschraffur verzierter Glockenbecher.
Mus. Schwerin E326.
JACOBS 1991, 52 Kat.-Nr.231; Taf.20,13.

50. Borchtitz Fpl.1, Kr. Rügen.
Großsteingrab.
Zonenartig in Zahnstocktechnik verzierte Becherscherben.
LM Schwerin 1994/324.
FUNDBERICHTE 1995, 236f., Abb.36.

51. Brüssow Fpl.55, Kr. Uckermark. Mbl. 2550, R. ^{54}41260, H. ^{59}20170.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Waren IV/78/397.
JACOBS 1991, 67 Kat.-Nr.549.

52. Brüssow Fpl.62, Kr. Uckermark. Mbl. 2650, R. ^{54}41500, H. ^{59}16820.
Einzelfund.
In Zahnstocktechnik verzierte Randscherbe.
Mus. Waren IV/80/13.
JACOBS 1991, 67 Kat.-Nr.550.

53. Brüssow, Kr. Uckermark.
Einzelfunde (?).
In Zahnstocktechnik verzierte Randscherbe.
Verbleib ?
JACOBS 1991, 67 Kat.-Nr.551,1; Taf.30,10.

54. Brüssow-Hammelstall Fpl.1 „Hammelstaller Berg“, Kr. Uckermark. Mbl. 2650, R. ^{54}40980, H. ^{59}16680.
Fundstreuung (?).
In Zahnstocktechnik verzierte Randscherbe. *Von derselben Fundstelle stammen noch eine jütländische Streitaxt Typ K8a, ein Flintbeil und eine dreiseitige Flintpfeilspitze.*
Mus. Waren IV/76/611,9.
JACOBS 1991, 67 Kat.-Nr.552,1; Taf.13,6.

55. Brüssow-Hammelstall Fpl.1 „Hammerstaller Berg“, Kr. Uckermark. Mbl. 2650, R. ^{54}40980, H. ^{59}16680.
Flachgrab 7.
Metopenartig verzierter Becher. Zonenartig in Kreuzschraffur verzierte Randscherben. *Aus demselben Grab stammen ein Zapfenbecher, ein schnurverzierter Becher, schnurverzierte Scherben, eine jütländische Streitaxt Typ K8, ein Flintbeil und drei trianguläre Flintpfeilspitzen.*
Verbleib ?
JACOBS 1991, 68 Kat.-Nr.559,1-4, 9.

56. Büttelkow, OT von Wischuer, Kr. Bad Doberan.
Steinkreis.
Becher mit Fischgrätenmuster in Zahnstocktechnik.
Verbleib ?
JACOBS 1991, 42 Kat.-Nr.29.

57. Camin Fpl.136, Kr. Ludwigslust. Mbl. 2531, R. ^{44}30480, H. ^{59}26250.
Einzelfunde (?).
Zwei in Zahnstocktechnik verzierte Randscherben.
Mus. Schwerin 69/31.
JACOBS 1991, 52 Kat.-Nr.242,1+2.

58. Dedelow Fpl.20, Kr. Uckermark. Mbl. 2648, R. ^{54}19120, H. ^{59}14700.
Einzelfunde.
In Zahnstocktechnik verzierte Scherbe. *Von derselben Fundstelle stammt noch eine schnurverzierte Scherbe.*
Mus. Waren IV/75/303.
JACOBS 1991, 70 Kat.-Nr.602,2.

59. Dehmen Fpl.1 „Eich-Horst“, OT von Glasewitz, Kr. Güstrow. Mbl. 2239, R. ^{45}18440, H. ^{59}62880.
Einzelfund.
In Zahnstocktechnik verzierte Randscherbe.
Mus. Güstrow I 80/43 (Slg. Schuldt, Güstrow).
JACOBS 1991, 53 Kat.-Nr.250.

60. Dumsevitz, OT von Groß Schoritz, Kr. Rügen.
Grab 2.
Zonenartig in Zahnstocktechnik verzierter Becher. *Aus demselben Grab stammen ein großer Becher, „ähnlich dem vorigen“, eine jütländische Felsgesteinaxt Typ A3c sowie zwei hohlgeschliffene Flintbeile.*
Mus. Stralsund 7763.
JACOBS 1991, 43 Kat.-Nr.42,1+2; Taf.13,1.

61. Flessenow „Hasenberg“, Kr. Parchim. Mbl. 2234, R. ^{44}66780, H. ^{59}58600.
Einzelfund.
Tonnenförmiger Zonenbecher.
Mus. Schwerin 65/14.
JACOBS 1991, 53 Kat.-Nr.263.

62. Frauenmark, Kr. Parchim. Mbl. 2436, R. ^{44}79200, H. ^{59}32070.
Großsteingrab, große Kammer.
Zwei mit einem in Zahnstocktechnik ausgeführten Metopenmuster verzierte Gefäßscherben. *Aus derselben Kammer stammt ein s-förmig geschweifter Becher mit vier Griffleisten am Hals.*
Mus. Schwerin 65/13.
JACOBS 1991, 53 Kat.-Nr.264,2; Taf.26,27.

63. Friedland, Kr. Mecklenburg-Strelitz. Bei Mohrmannsdorf.
Einzelfund.
Metopenartig verzierter Zapfenbecher.
Mus. Schwerin 36/9.
JACOBS 1991, 71 Kat.-Nr.632; Taf.19,2.

64. Gaarzer Hof Fpl.2, OT von Rerik, Kr. Bad Doberan. Mbl.1835, R. ^{44}76480, H. ^{59}97300.
Ganggrab
Zwei in Zahnstocktechnik verzierte Becher. *Aus demselben Grab stammen eine mit hängenden Dreiecken verzierte Scherbe und Nackenbruchstücke einer jütländischen Streitaxt Typ K4/7b.*
Mus. Schwerin 67/34, 151+186.
JACOBS 1991, 43 Kat.-Nr.45,1+2; Taf.9,1+2.

65. Göritz Fpl.18, Kr. Uckermark. Mbl. 2549, R. ^{54}28420, H. ^{59}15140.
Einzelfund.
In Zahnstocktechnik verzierte Randscherbe.
Mus. Prenzlau IV/3247.
JACOBS 1991, 72 Kat.-Nr.660.

66. Gramzow Fpl.12, Kr. Uckermark. Mbl. 2749, R. ^{54}31750, H. ^{58}97430.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Prenzlau IV/530.
JACOBS 1991, 73 Kat.-Nr.669.

67. Greifswald-Hafen, Stadt Greifswald.
Einzelfund.
Gestielte Flintpfeilspitze.
Staatl. Museen Berlin Ic 1691.
JACOBS 1991, 44 Kat.-Nr.64,4; Taf.62,35.

68. Groß Upahl, Kr. Güstrow „Wendenkirchhof“. Mbl. 2238, R. ^{45}01460, H. ^{59}55600.
Bestattung.
Gedrungener, weitmundiger Becher mit abgesetztem Standfuß, in Zahnstocktechnik verziert. *Aus derselben Bestattung stammen ein kleiner Becher in Kümmerkeramik, weitere verzierte und unverzierte Scherben, eine Flintpfeilspitze sowie Knochen- und Zahnfragmente von verschiedenen Tieren.*
Mus. Schwerin 59/66,63.
JACOBS 1991, 54 Kat.-Nr.284,1; Taf.14,4.

69. Grünz Fpl.16, Kr. Uecker-Randow. Mbl. 2750, R. ^{54}41880, H. ^{59}03720.
Hügelgrab, Grab V.
Unverzierte Vierfüßchenschale. *Aus demselben Grab stammen vier Schnurbecher, ein Becher mit Fischgrätenverzieung, eine jütländische Streitaxt Typ K8a, ein Flintbeil, ein Glättstein und zwei Mahlsteinfragmente.*
Mus. Szczecin A/18098/MPZ(PS4435)NB.
JACOBS 1991, 74f. Kat.-Nr.689,6; Taf.18,12.

70. Heinrichshof, OT von Lübs, Kr. Ostvorpommern.
Flachgräber.
In Zahnstocktechnik verzierte Scherbe. *Aus den Gräbern stammen noch zwei jütländische Streitäxte Typ A1 und C2.*
Mus. Szczecin 3359b.
JACOBS 1991, 74 Kat.-Nr.699,1; Taf.29,20.

71. Helm, OT von Wittenburg, Kr. Ludwigslust.
Einzelfund.
Gestielte Flintpfeilspitze.
Mus. Schwerin St.9
JACOBS 1991, 55 Kat.-Nr.297.

72. Jabel, Kr. Müritz.
Einzelfund.
Zonenartig in Zahnstocktechnik verzierte Scherbe.
Mus. Schwerin St.555
JACOBS 1991, 75 Kat.-Nr.717,1.

73. Karow Fpl.7, Kr. Parchim. Mbl.2138, R. ^{45}10690, H. ^{59}69480.
Einzelfund.
In Zahnstocktechnik verzierte Randscherbe.
Mus. Güstrow I 76/122.
JACOBS 1991, 55 Kat.-Nr.304.

74. Käselow, OT von Mistorf, Kr. Güstrow.
Einzelfund.
Zonenartig verzierte Scherben.
Mus. Güstrow.
RASSMANN 1993, 136 Kat.-Nr.326.

75. Klein Görnow Fpl.1 „Opfertisch“, OT von Groß Görnow, Kr. Parchim. Mbl. 2236, R. ^{44}87650, H. ^{59}59000.
Ganggrab 1.
Zonenartig in Zahnstocktechnik verzierte Becherscherben. *Aus demselben Grab stammen noch Oberschenkel-, Wirbel- und Beckenknochen.*
Mus. Schwerin 66/13,7,8,14.
JACOBS 1991, 55 Kat.-Nr.310,2; Taf.9,5.

76. Klein Methling Fpl.17, OT von Stubbendorf, Kr. Demmin. Mbl. 2042, R. ^{45}54400, H. ^{59}85400.
Einzelfunde.
Scherbe und Bandhenkel, beide in Zahnstocktechnik verziert.
Mus. Waren IV/85/346.
JACOBS 1991, 76 Kat.-Nr.741,1+2.

77. Klein Schwiesow Fpl.3, Kr. Güstrow.
Einzelfunde.
In Zahnstocktechnik verzierte Scherbe. *Von demselben Fundplatz stammt noch eine schnurverzierte Scherbe.*
Mus. Güstrow I 1972/171.
RASSMANN 1993, 139 Kat.-Nr.374.

78. Klein Schwiesow Fpl.6, Kr. Güstrow. Mbl.2138, R. ^{45}07890, H. ^{59}65520.
Fundstreuung (?).
Zehn in Zahnstocktechnik verzierte Scherben (davon zwei Randscherben). *Von derselben Fundstelle stammt noch eine schnurverzierte Scherbe.*
Mus. Güstrow I 80/42 (Slg. Schuldt, Güstrow).
JACOBS 1991, 55 Kat.-Nr.315,2-4; Taf.28,1-4, 28,6-10.

79. Kleptow, OT von Ludwigsburg, Kr. Uckermark.
Einzelfunde (?).
Armschutzplatte.
Märkisches Mus. Berlin II 9052 (verloren).
JACOBS 1991, 77 Kat.-Nr.744,3; Taf.64,10.

80. Kückenshagen, OT von Saal, Kr. Nordvorpommern, „Garten des Lehrers Kaßner“
Einzelfund
In Zahnstocktechnik verzierte Randscherbe.
Mus. Stralsund (Mus. Ribnitz-Damgarten IV 115).
JACOBS 1991, 46 Kat.-Nr.103.

81. Ladenthin Fpl.4, OT von Grambow, Kr. Uecker-Randow. Mbl. 2652, R. ^{54}58100, H. ^{59}16060.
Einzelfund.
Zonenartig verzierter Becher.
Mus. Szczecin A/18898/MPZ(PS.4781).
JACOBS 1991, 77 Kat.-Nr.759; Taf.18,1.

82. Lanz Fpl.4 „Gülchenberg“, Kr. Prignitz. Mbl.2935, R. ^{44}72600, H. ^{58}80780.
Siedlung.
Schicht II: Sechs in Zahnstocktechnik verzierte Scherben. *Aus derselben Schicht stammen noch zahlreiche verzierte Scherben, z.T. Reste von Riesenbechern mit Wulstleistenverzierung.*
Schicht III: 37 in Zahnstocktechnik verzierte Scherben. *Aus derselben Schicht stammen weitere, überwiegend schnurverzierte Scherben.*
Grube zu Schicht III: In Zahnstocktechnik verzierte Scherben, z.T. weiß inkrustiert. Bruchstück einer Armschutzplatte.
Schicht II/III: Sechs in Zahnstocktechnik verzierte Scherben. *Aus diesem Bereich stammen weitere verzierte Scherben.*
Lesefunde, überwiegend aus Schicht III: Fuß einer Füßchenschale, zwei in Zahnstocktechnik verzierte Scherben. *Als Lesefunde wurden weitere verzierte Scherben geborgen.*
Mus. Schwerin 65/19, 66/36; Mus. Lenzen; Mus. Perleberg 6503.
JACOBS 1991, 57 Kat.-Nr.344,3-4,6,8-10,14-15,19; Taf.27,15+16.

83. Lenzen Fpl.15+18, Kr. Prignitz.
Einzelfunde.
Sechs in Zahnstocktechnik verzierte Scherben.
Mus. Lenzen.
JACOBS 1991, 57 Kat.-Nr.348,2+3; Taf.27,3.

84. Lenzen Fpl.51, Kr. Prignitz.
Fundstreuung (?).
25 in Zahnstocktechnik verzierte Scherben, davon drei mit Metopenverzierung. Zwei Fragmente von Standfüßchen. *Von derselben Fundstelle stammen weitere verzierte Scherben.*
Mus. Lenzen.
JACOBS 1991, 57 Kat.-Nr.349,1-6,9; Taf.27,5-13.

85. Liepen Fpl.5, OT von Gielow, Kr. Demmin. Mbl. 2342, R. ^{45}48160, H. ^{59}48900.
Einzelfund.
Fragment einer Armschutzplatte.
Mus. Waren IV/66/342b.
JACOBS 1991, 77 Kat.-Nr.771; Taf.64,12.

86. Lubmin, Kr. Ostvorpommern.
Einzelfund.
Gestielte Flintpfeilspitze.
Staatl. Museen Berlin Ic 1109 (verloren).
JACOBS 1991, 46 Kat.-Nr.114,2.

87. Lüssow Fpl.3, Kr. Güstrow. Mbl. 2138, R. ^{45}09690, H. ^{59}66530.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Güstrow 75/111.
JACOBS 1991, 57 Kat.-Nr.354.

88. Lüssow Fpl.15, Kr. Güstrow. Mbl. 2138, R. ^{45}09480, H. ^{59}66300.
In Zahnstocktechnik verzierte Scherbe.
Mus. Güstrow I 78/77.
JACOBS 1991, 57 Kat.-Nr.355.

89. Mechow, OT von Dolgen, Kr. Mecklenburg-Strelitz.
„in Grabmal“
Armschutzplatte.
Mus. Neustrelitz 1820 (verloren).
JACOBS 1991, 78 Kat.-Nr.796, Taf.64,11.

90. Melzow Fpl.19, OT von Warnitz, Kr. Prenzlau. Mbl. 2849, R. ^{54}24080, H. ^{58}92100.
Einzelfund.
Zwei in Zahnstocktechnik verzierte Scherben (eine Randscherbe).
Mus. Prenzlau IV/314.
JACOBS 1991, 79 Kat.-Nr.805.

91. Muchow Fpl.4 „Oeverlandscher Berg“, Kr. Ludwigslust. Mbl. 2636, R. ^{44}79300, H. ^{59}09820.
Steinkiste.
Zwei in Zahnstocktechnik verzierte Scherben (davon eine Randscherbe). Eine Scherbe mit Kreuzschraffurband.
Kreisdepot Ludwigslust 0467a-c.
JACOBS 1991, 58 Kat.-Nr.362,1-3; Taf.29,26-28.

92. Muchow Fpl.11, Kr. Ludwigslust. Mbl. 2635, R. ^{44}76180, H. ^{59}08600.
Fundstreuung (?)
Elf zonenartig in Zahnstock- und Ritztechnik verzierte Scher-

ben (davon sieben Randscherben), drei metopenverzierte Scherben. *Von derselben Fundstelle stammt eine in imitierter Schnurtechnik verzierte Scherbe.*
Kreisdepot Ludwigslust 0439.
JACOBS 1991, 58 Kat.-Nr.363,1-3; Taf.26,18-21, 28,13-15.

93. Mühl Rosin (ehemals Kirch Rosin) Fpl.1, Kr. Güstrow. Mbl. 2239, R. ^{45}15260, H. ^{59}59350.
Fundstreuung (?).
Drei in Zahnstocktechnik verzierte Scherben. *Von derselben Fundstelle stammt noch eine schnurverzierte Scherbe.*
Mus. Güstrow I 76/69.
JACOBS 1991, 58 Kat.-Nr.365,2-4; Taf.29,16-18.

94. Naschendorf, Kr. Nordwestmecklenburg, „S-Teil d. Everstorfer Forstes". Mbl. 2133, R. ^{44}52690, H. ^{59}70480.
Ganggrab 1
Zonenartig in Zahnstocktechnik verzierter Becher. *Aus demselben Grab stammt ein dicknackiges Flintbeil mit hohlgeschliffener Schneide.*
Mus. Schwerin 66/40,20.
JACOBS 1991, 47 Kat.-Nr.128,1; Taf.14,1.

95. Naschendorf, Kr. Nordwestmecklenburg, „S-Teil d. Everstorfer Forstes". Mbl. 2133, R. ^{44}52810, H. ^{59}70260.
Ganggrab2, Fundkomplex II
Zonenartig verzierter, gedrungener Becher mit zwei Ösenhenkeln. *Aus demselben Fundkomplex stammen noch ein dicknackiges Flintbeil mit leicht hohlgeschliffener Schneide und ein zweifach durchlochtes Bernsteinstück.*
Mus Schwerin 66/41,2.
JACOBS 1991, 47 Kat.-Nr.129,5; Taf.16,1.

96. Neubrandenburg Fpl.7, Stadt Neubrandenburg. Mbl. 2445, R. ^{45}87050, H. ^{59}38850.
Einzelfunde (?).
In Zahnstocktechnik verzierte Scherbe. Von derselben Fundstelle stammt noch eine jütländische Streitaxt Typ C1d.
Mus. Neubrandenburg 1709
JACOBS 1991, 81 Kat.-Nr.834,1, Taf.29,19.

97. Neuburg Fpl.5, OT von Neuburg-Steinhausen, Kr. Nordwestmecklenburg. Mbl. 2035, R. ^{44}72640, H. ^{59}80140.
Siedlungsgruben
Aus Grube 8 sowie aus Grube 10/11 je eine zahnstockverzierte Wandscherbe. *Aus Grube 9 stammt noch eine wohl der Einzelgrabkultur zuzurechnende Randscherbe.*
Mus. Schwerin 69/64.
JACOBS 1991, 47 Kat.-Nr.132,1+3.

98. Neuendorf, OT von Saal, Kr. Nordvorpommern.
Einzelfund.
Gestielte Flintpfeilspitze.
Mus. Stralsund o.Nr.
JACOBS 1991, 47 Kat.-Nr.135; Taf.62,36.

99. Neu Mühle Fpl.1 „Schulzenwiese", OT von Mistorf, Kr. Güstrow. Mbl.2138, R. ^{45}10880, H. ^{59}70400.
Einzelfund.
Scherben eines zonenverzierten Bechers.
Mus. Güstrow.
JACOBS 1991, 58 Kat.-Nr.378.

100. Niendorf Fpl.1 „Schaulkamp", Kr. Ludwigslust. Mbl. 2733, R. ^{44}50020, H. ^{59}00350.
Einzelfund.
Scherben eines schnurverzierten Bechers (Zonenbecher?).
Kreisdepot Ludwigslust Nie 1.
JACOBS 1991, 59 Kat.-Nr.381.

101. Pasewalk Fpl.130, Kr. Uecker-Randow. Mbl. 2449, R. ^{54}30740, H. ^{59}33620.
Einzelfund.
Armschutzplatte.
Mus. Waren IV/83/820.
JACOBS 1991, 81 Kat.-Nr.853; Taf.64,13.

102. Plöwen Fpl.28 „Preesterplohn", Kr. Uecker-Randow. Mbl. 2551, R. ^{54}51240, H. ^{59}25260.
Siedlungsstelle (?).
Schnitt II: Zwei in Zahnstocktechnik verzierte Scherben (eine Randscherbe), eine in Zahnstocktechnik verzierte Henkelöse. *Aus demselben Schnitt stammen eine schnurverzierte Randscherbe, ein schnurverzierter Zapfenbecher und ein wulstleistenverzierter Riesenbecher.*
Mus. Waren IV/78/544,1+2, IV/78/469, IV/80/110.
JACOBS 1991, 81f. Kat.-Nr.864,4,6,8+9,11; Taf.14,10.

103. Prislich, Kr. Ludwiglust.
Einzelfund.
Glockenbecher („Zonenbecher") mit Metopenverzierung.
Kreisdepot Ludwiglust (verloren).
JACOBS 1991, 60 Kat.-Nr.399; Taf.19,3.

104. Prüzen (ehemals Mühlengeez) Fpl.7, Kr. Güstrow. Mbl. 2238, R. ^{45}03160, H. ^{59}59000.
Siedlungsstelle.
Grube 8: In Zahnstocktechnik verzierte Randscherbe. *Aus derselben Grube stammen weitere unverzierte Scherben und wenige Flintartefakte.*
Grube 10: Reste einer großen in Zahnstocktechnik verzierten Schale mit abgesetztem Standfuß. *Aus derselben Grube stammen weitere verzierte und unverzierte Scherben und wenige Flintartefakte.*
Mus. Güstrow I 78/4,29-42.
JACOBS 1991, 60 Kat.-Nr.400,1+9; Taf.28,11+12.

105. Raden Fpl.6, OT von Lalendorf, Kr. Güstrow. Mbl. 2240, R. ^{45}29300, H. ^{59}57600.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus Güstrow I 69/39.
JACOBS 1991, 60 Kat.-Nr.406.

106. Rothenkirchen Fpl.4, OT von Rambin, Kr. Rügen. Mbl. 1645, R. ^{45}81180, H. ^{60}26110.
Einzelfund (?).
In Zahnstocktechnik verzierte Scherbe.
Mus. Stralsund 1962:40.
JACOBS 1991, 48 Kat.-Nr.160.

107. Russow, OT von Roggow, Kr. Bad Doberan.
Flachgrab.
Scherbe mit zonenartiger Verzierung in Zahnstocktechnik.
Mus. Schwerin.
JACOBS 1991, 49 Kat.-Nr.163.

108. Schlakendorf, OT von Neukalen, Kr. Demmin Fpl.6. Mbl. 2142, R. ^{45}49030, H. ^{59}65290.
Einzelfunde (?).
Je eine zonenartig und eine in Zahnstocktechnik verzierte Scherbe. Scherbe einer Füßchenschale.
Mus. Waren IV/79/198a.
JACOBS 1991, 84 Kat.-Nr.919,1-3; Taf.29,24+25.

109. Schönfeld Fpl.26, Kr. Uckermark. Mbl. 2143, R. ^{45}62160, H. ^{59}70230.
Einzelfunde (?).
Randscherbe mit schraffierter Zierzone. *Von derselben Fund-*

stelle stammt eine weitere verzierte Scherbe.
Mus. Prenzlau IV/3275.
JACOBS 1991, 84 Kat.-Nr.927,1+2.

110. Serrahn „Glietstein", „Schietbusch", Kr. Güstrow. Mbl.2340, R. ^{45}23500, H. ^{59}47920.
Grab 2.
Mit Meißeleinstichen verzierte Dreifüßchenschale mit abgesetzter Standfläche und drei flachen Standfüßen. *Aus demselben Grab stammen drei leicht hohlgeschliffene Flintbeile, davon zwei dicknackig, das Nackenbruchstück einer jütländischen Streitaxt („atypische H-Axt") und Skelettreste von mindestens vier Individuen.*
Mus. Schwerin 64/25,28.
JACOBS 1991, 61 Kat.-Nr.423,2; Taf.17,12.

111. Spoitgendorf Fpl.6, Kr. Güstrow.
Siedlungsstelle (?).
Drei in Zahnstocktechnik verzierte Scherben.
Verbleib?
KONCZAK 1998, 33, Abb.6e-g.

112. Starsow Fpl.5 „Pfeilacker", OT von Mirow, Kr. Mecklenburg-Strelitz. Mbl. 2742, R. ^{54}34580, H. ^{59}37010.
Siedlungsstelle (?).
Zonenartig verzierte Scherbe. *Von derselben Fundstelle stammen noch mehrere verzierte Scherben und zahlreiche Flintpfeilspitzen (lanzettförmig und mit Schaftzunge).*
Mus. Neustrelitz Zk.V,2127 (verloren).
JACOBS 1991, 85f. Kat.-Nr.952,5; Taf.26,8.

113. Steinberg Fpl.1, OT von Baek, Kr. Prignitz.
Flachgrab (?).
Becher mit breitem, metopenartigem Zonenband.
Mus. Perleberg 3559.
JACOBS 1991, 61 Kat.-Nr.428; Taf.15,8.

114. Strehlow, OT von Hohenbrünzow, Kr. Demmin
Einzelfund.
Gestielte Flintpfeilspitze.
Mus. Demmin KD IV/164/631 (Slg. Koppermann/Ganschendorf 570).
JACOBS 1991, 86 Kat.-Nr.965, Taf.62,39.

115. Techentin Fpl.5, Kr. Parchim. Mbl.2634, R. ^{59}09330, H. ^{44}62740.
Fundstreuung (?).
Sechs zonenartig und zwei mit einfacherem Muster in Zahnstocktechnik verzierte Scherben, vier in Kreuzschraffur verzierte Scherben, eine metopenverzierte Scherbe. Armschutzplatte. *Von derselben Fundstelle stammen noch weitere verzierte Scherben.*
Kreisdepot Ludwigslust 1352, 0861.
JACOBS 1991, 62 Kat.-Nr.440,1+2,4+5,8; Taf.28,22-25,27,29.

116. Teterow, Kr. Güstrow.
Einzelfund.
In Zahnstocktechnik verzierte Randscherbe.
Mus. Schwerin 35 (Slg. Asmus, Teterow 200).
JACOBS 1991, 93 Kat.-Nr.22N.

117. Valluhn, Kr. Ludwigslust.
Einzelfund.
Armschutzplatte.
Mus. Schwerin 4603.
JACOBS 1991, 62 Kat.-Nr.448; Taf.64,6.

118. Verchen Fpl.24 „Trompeterhöhe", Kr. Demmin. Mbl. 2143, R. ^{45}58100, H. ^{59}70640.
Grabfunde (?).
Verzierte Scherben in Zahnstock- und imitierter Schnurtechnik. *Von derselben Fundstelle stammen vier jütländische Streitäxte Typ K4b/K5f/K6b sowie zwei Streitaxtfragmente Typ A3d/F1h.*
Mus. Schwerin 85/132,40.
JACOBS 1991, 87 Kat.-Nr.992,1.

119. Verchen Fpl.118, Kr. Demmin. Mbl. 2143, R. ^{45}58010, H. ^{59}70800.
Fundstreuung (?).
In Zahnstocktechnik verzierte Scherbe. *Von derselben Fundstelle stammen noch zwei weitere verzierte Scherben.*
Mus. Schwerin o.Nr. (Komplex 4).
JACOBS 1991, 88 Kat.-Nr.998.

120. Vitt, OT von Putgarten, Kr. Rügen
Einzelfunde (?).
Zwei gestielte Flintpfeilspitzen.
Mus. Stralsund 8405.
JACOBS 1991, 50 Kat.-Nr.192,1+2; Taf.62,37 (1).

121. Wendisch-Priborn Fpl.10, Kr. Parchim. Mbl. 2639, R. ^{45}18650, H. ^{59}10410.
Einzelfunde (?).
Scherbe mit zonenartiger Kreuzschraffur. *Von derselben Fundstelle stammen zwei weitere verzierte Scherben.*
Mus. Goldberg 1976/IV 375/1.
JACOBS 1991, 63 Kat.-Nr.457,3.

122. Wischuer, Kr. Bad Doberan.
Einzelfund.
Gestielte Flintpfeilspitze.
Mus. Schwerin 36/?
JACOBS 1991, 50 Kat.-Nr.199.

123. Witzin Fpl.15, Kr. Parchim. Mbl. 2237, R. ^{44}93650, H. ^{59}54180.
Einzelfunde (?).
Zwei in Zahnstocktechnik verzierte Scherben. Von derselben Fundstelle stammen noch zwei schnurverzierte Scherben.
Mus. Schwerin 63/65.
JACOBS 1991, 63 Kat.-Nr.463,2+3.

124. Wollschow Fpl.14 „Ochsentempel", Kr. Uckermark. Mbl. 2651, R. ^{54}47860, H. ^{59}18360.
Flachgrab.
Gedrungener Becher und Zweiösenbecher mit zonenartiger Verzierung. *Aus demselben Grab stammen noch ein Becher mit Fischgrätenverzierung und vier Becher mit Gurtbandverzierung.*
Märkisches Museum Berlin.
JACOBS 1991, 90 Kat.-Nr.1045,1+7, Taf.8,11+17.

125. Zepelin Fpl.6, Kr. Güstrow. Mbl. 2138, R. ^{45}02540, H. ^{59}65600.
Einzelfunde (?).
In Zahnstocktechnik verzierte Scherbe. Gestielte Flintpfeilspitze.
Mus. Güstrow o.Nr.
JACOBS 1991, 64 Kat.-Nr.476,1+2; Taf.62,38.

126. Zepelin Fpl.14, Kr. Güstrow. Mbl. 2138, R. ^{45}01530, H. ^{59}65110.
Einzelfunde.
Zwei in Zahnstocktechnik verzierte Scherben.
Mus. Güstrow I/82/129, I/85/258.
JACOBS 1991, 64 Kat.-Nr.479,1+2; Taf.30,8+9.

127. Zickhusen Fpl.2, Kr. Nordwestmecklenburg. Mbl. 2234, R. ^{44}61190, H. ^{59}69070.
Grabfund (?).
Zonenartig verzierter Glockenbecher. *Aus demselben Grab stam-*

men zwei Becher mit Fischgrätenverzierung.
Mus. Schwerin TI B1b,44.
JACOBS 1991, 64 Kat.-Nr.481,1; Taf.4,7.

128. Ziesendorf, Kr. Bad Doberan. Mbl. 2038, R. ^{45}00840, H. ^{59}83240.
Vor dem Eingang einer Grabkammer.
Vier Scherben mit zonenartiger Kreuzschraffur. *Aus demselben Bereich stammt eine querschneidige Flintpfeilspitze.*
Mus. Schwerin (verloren).
JACOBS 1991, 51 Kat.-Nr.211,11-14.

129. FO unbekannt **„Jasmund“**, Kr. Rügen.
Einzelfunde.
Zwei Armschutzplatten.
Slg. Greifswald 1928/5 (2797) + 1928/6 (207).
JACOBS 1991, 51 Kat.-Nr.214,1+2; Taf.64,7+8.

Niedersachsen

130. Achim Fpl.13 „Bürgerpark“, Stadt Achim, Kr. Verden. Mbl. 2920, R. ^{35}03650, H. ^{58}74400.
Grabfund.
In Schnurtechnik verzierter Becher. Scherben einer in Schnur- und Meißelstichtechnik verzierten Schale.
Mus Verden V 68, V 71.
STRAHL 1990, 225 Kat.-Nr.988B, Taf.104,1-2.

131. Ahlerstedt, Gde. Ahlerstedt, Kr. Stade.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Stade 1172.
STRAHL 1990, 184 Kat.-Nr.850.

132. Altenwalde, Stadt Cuxhaven, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Bremerhaven V/?/66.
STRAHL 1990, 15 Kat.-Nr.67.

133. Amelinghausen-Sottorf, Kr. Lüneburg.
Großsteingrab.
In Zahnstocktechnik verzierter Becher. Gestielte Flintpfeilspitze.
Mus. Lüneburg.
KÖRNER / LAUX 1980, 146 Abb.28.

134. Apensen Fpl.73, Gde. Apensen, Kr. Stade.
Fundstreuung.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Kreisarchäologie Stade.
FUNDCHRONIK 1995, 227 Kat.-Nr.84, Abb.13,6 (D. Ziermann).

135. Armsen, Gde. Kirchlinteln, Kr. Verden. Mbl. 3022, R. ^{35}24680, H. ^{58}64490.
Grabhügel, Untergrab.
Gedrungener unverzierter Becher.
Mus. Verden 1307.

136. Bad Zwischenahn-Kayhaseresch, Kr. Ammerland.
Einzelfund.
Zonenartig verzierter Glockenbecher.
Mus. Oldenburg 6593.
PÄTZOLD 1954, 19f.

137. Bademühlen, Stadt Zeven, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Slg. Maack.
STRAHL 1990, 153 Kat.-Nr.686B.

138. Barchel Fst.64/69, Gde. Oerel, Kr. Rotenburg/W.
Zerstörter Grabhügel.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16). *Aus demselben Hügel stammt noch eine weitere Flintpfeilspitze.*
Schulslg. Barchel.
STRAHL 1990, 132 Kat.-Nr.590.

139. Bederkesa Fpl.80a, Flecken Bederkesa, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa IV/644/61.
STRAHL 1990, 11 Kat.-Nr.42B.

140. Benkel, Kr. Verden „Hasenberg“. Mbl. 2821, R. ^{35}12800, H. ^{58}93280.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Verden V 1045.
SCHÜNEMANN 1974, 44, Abb.17.

141. Berne Fpl.113, Gde. Berne, Kr. Wesermarsch.
Fundstreuung.
Zwei zonenartig verzierte Randscherben. *Von derselben Fundstelle stammen eine Geweihaxt und eine Spitze aus Geweih.*
Priv.-Bes. Kewel.
FUNDCHRONIK 2001, 36f. Kat.-Nr.26, Abb.24,1-2 (J. Eckert).

142. Beverstedt Fpl.66, Flecken Beverstedt, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa.
STRAHL 1990, 11 Kat.-Nr.44A.

143. Bierden, Stadt Achim, Kr. Verden.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Verden V 1385.
STRAHL 1990, 227 Kat.-Nr.994, Taf.104,5.

144. Bossel, Gde. Burweg, Kr. Stade.
Grabhügel oder Langbett?
In Zahnstocktechnik verzierte Scherben. *Aus demselben Grab stammt noch Material der Trichterbecherkultur.*
IfD Hannover, Außenstelle Lüneburg?
STRAHL 1990, 196 Kat.-Nr.886, Taf.90,5.

145. Brauel, Stadt Zeven, Kr. Rotenburg/W.
Zerstörter Grabhügel.
„Scherbe eines Glockenbechers“.
Slg. Müller-Brauel 1018 (verloren).
STRAHL 1990, 154 Kat.-Nr.689.

146. Breddorf, Gde. Breddorf, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Tarmstedt.
STRAHL 1990, 100 Kat.-Nr.479.

147. Bremervörde Fpl.24, Stadt Bremervörde, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Bremervörde.
STRAHL 1990, 102 Kat.-Nr.487B.

148. **Bruchtorf**, Kr. Uelzen.
Grabhügelfeld, Hügel 1.
Zonenartig verzierter Becher.
Mus. Lüneburg.
KRÜGER 1926, 26 Kat.-Nr.2, Abb.2.

149. **Bruchtorf**, Kr. Uelzen.
Grabhügelfeld, Hügel 7.
Zonenartig verzierter Becher.
Mus. Lüneburg.
KRÜGER 1926, 27 Kat.-Nr.7, Abb.7.

150. **Bülstedt** Fpl.70, Gde. Bülstedt, Kr. Rotenburg/W.
Grabhügel, Bestattung in „Bodengrab".
In Ritz- und Kerbtechnik verzierter Becher.
LM Hannover 260,348:56.
STRAHL 1990, 105 Kat.-Nr.501G, Taf.34,3.

151. **Bütlingen** „Auf den Höfen", Gde. Tespe, Kr. Harburg.
Einzelfunde.
In Zahnstocktechnik verzierte Scherbe. *Von derselben Fundstelle stammen noch weitere verzierte Scherben.*
Slg. Reinstorf.
STRAHL 1990, 81f. Kat.-Nr.384A, Taf.27,3.

152. **Bütlingen** „Knickberg", Gde. Tespe, Kr. Harburg.
Einzelfund.
Vier in Zahnstocktechnik verzierte Scherben.
Geol. Landesanst. Berlin.
STRAHL 1990, 81f. Kat.-Nr.384B, Taf.27,6-10.

153. **Collinghorst** Fpl. OL-Nr.2811/1:9-2, Gde. Rhauderfelden, Kr. Leer.
Grabhügel (?) mit Kreisgrabenanlage.
Zonenartig in Zahnstocktechnik verzierter Glockenbecher. Zwei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
OL Ostfries. Forschungsstelle Aurich.
FUNDCHRONIK 1998, 34ff. Kat.-Nr.39, Abb.23 (R. Bärenfänger).

154. **Dauelsen-Halsmühlen**, Kr. Verden. Mbl. 3021, R. ^{35}16000, H. ^{58}67740.
Fundstreuung (Flintschlagplatz).
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Verden 738.
SCHÜNEMANN 1974, 44.

155. **Daverden** Fpl.9, Gde. Flecken Langwedel, Kr. Verden.
Grabhügel? (eisenzeitliche Siedlung).
Vollständig schnurverzierter Becher.
Archäol. Denkmalpflege Verden
FUNDCHRONIK 1997, 368 Kat.-Nr.38 (J. Krumland).

156. **Daverden** „Brillkamp", Flecken Langwedel, Kr. Verden. Mbl. 3021, R. ^{35}11850, H. i.M. ^{58}73525
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Verden V 1194.
STRAHL 1990, 239 Kat.-Nr.1042A, Taf.108,11.

157. **Dehnsen**, Kr. Lüneburg.
Einzelfund (?).
In Zahnstocktechnik verzierter Becher.
Mus. Lüneburg
KRÜGER 1926, 28 Kat.-Nr.8, Abb.8.

158. **Deutsch-Evern**, Kr. Lüneburg.
Siedlungsstelle oder Grab? Alte Oberfläche unter bronzezeitlichem Hügel 17.
Überwiegend zonenartig in Zahnstock- und Schnurtechnik verzierte Scherben.
Mus. Lüneburg.
KÖRNER 1959, 5 Abb.1.

159. **Donnern** Fpl.41, Gde. Loxstedt, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa.
STRAHL 1990, 34 Kat.-Nr.162B.

160. **Dörverden** Fpl.10, Gde. Dörverden, Kr. Stade.
Einzelfunde von Gräberfeld jüngerer Perioden.
In Zahnstocktechnik verzierte Scherbe.
LM Hannover 385:57.
STRAHL 1990, 228f. Kat.-Nr.1005, Taf.105,8.

161. **Edewecht** Fpl.102, Gde. Edewecht, Kr. Ammerland.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Priv.-Bes. G. Brumund.
FUNDCHRONIK 1995, 236 Kat.-Nr.120, Abb.17,1 (J. Eckert).

162. **Ehestorf**, Gde. Elstorf, Kr. Rotenburg/W.
Grabhügel, Bestattung 1.
In Zahnstocktechnik verzierter Becher mit schmalen, glatten plastischen Leisten.
Slg. Müller-Brauel 1550 (verloren): Mus. Vegesack 216 N, Mus. Worpswede 3052 N.
STRAHL 1990, 107 Kat.-Nr.508B, Taf.37,2.

163. **Ehestorf** Fpl.9, Gde. Elstorf, Kr. Rotenburg/W.
Grabhügel, aus der Aufschüttung.
In Zahnstocktechnik (?) verzierte Scherbe.
Slg. Müller-Brauel 1199 (?; verloren).
STRAHL 1990, 107ff. Kat.-Nr.508F, Taf.40,1.

164. **Ehestorf** Fpl.10, Gde. Elstorf, Kr. Rotenburg/W. Fst.10.
Gestörter Grabhügel, Bestattung 1.
In Zahnstocktechnik verzierter Becher. *Zu derselben Bestattung gehören eine jütländische Streitaxt Typ B1e und eine Flintspanklinge.*
Slg. Müller-Brauel 2425 (verloren).
STRAHL 1990, 107f. Kat.-Nr.508E, Taf.39,1.

165. **Eitzen** I Fpl.11, Gde. Bienenbüttel, Kr. Uelzen.
Siedlung.
In Zahnstocktechnik verzierte Scherben.
IfD Hannover, Außenstelle Lüneburg.
OA IfD Hannover.

166. **Elstorf** Fpl.7, Gde. Neu Wulmstorf, Kr. Harburg.
Auf der Grundfläche eines zerstörten Grabhügels.
In Zahnstocktechnik (?)verzierte Scherbe. *Aus demselben Bereich stammen weitere verzierte Scherben sowie acht Flintpfeilspitzen der Typen 7b und 9 nach KÜHN (1979, 68 Abb.16).*
Helms-Museum Hamburg 6754b.
STRAHL 1990, 69 Kat.-Nr.326, Taf.19,8.

167. **Emmeln** Fpl.14, Gde. Haren (Ems), Kr. Emsland.
Einzelfund.
Rillenverzierter Zonenbecher.
Landkreis Emsland, Meppen.
FUNDCHRONIK 1995, 236 Kat.-Nr.125, Abb.17,3 (A. Kaltofen).

168. Etelsen Fpl.8,11, Flecken Langwedel, Kr. Verden. Mbl. 2920, R. ^{35}07670, H. ^{58}75150.
Mehrperiodige Fundstreuung (?).
In Zahnstocktechnik verzierte Scherbe. *Aus demselben Bereich stammen zahlreiche weitere verzierte und unverzierte Scherben, ein Flintdolch sowie zwei Flintpfeilspitzen.*
Mus. Verden V 582b.
STRAHL 1990, 240 Kat.-Nr.1044, Taf.110,6.

169. Eversen Fpl.33, Gde. Stadt Bergen, Kr. Celle.
Mehrperiodige Siedlungsstelle.
In Zahnstocktechnik verzierte Scherben.
Heimatmus. Römstedthaus Bergen.
NELSON 2001, 191 Abb.1,2.

170. Fallingbostel „Tietlingen“, Stadt Fallingbostel, Kr. Soltau-Fallingbostel.
Grabhügel, Phase 1.
Zonenartig in Ritz-, Einzeleinstich- und Zahnstocktechnik verzierter Glockenbecher mit plastischer Leiste.
IfD Hannover, Außenstelle Lüneburg (?).
STRAHL 1990, 167 Kat.-Nr.745, Taf.73,1.

171. Fischerhude-Quelkhorn, Kr. Verden.
Einzelfunde.
Zwei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
Heimathaus Irmintraut Fischerhude.
SCHÜNEMANN 1974, 44, Abb.17.

172. Fleestedt, Gde. Seevetal, Kr. Harburg.
„Flachgrab ?“
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Lüneburg o.Nr.
STRAHL 1990, 78 Kat.-Nr.362.

173. Flögeln Fpl.48, Gde. Flögeln, Kr. Cuxhaven.
Mehrperiodige Siedlugsstelle.
In Zahnstocktechnik verzierte Scherben. *Von derselben Fundstelle stammen noch schnurverzierte Scherben, Riesenbecherscherben, Flintdolche und Flintpfeilspitzen Typ 7-10 nach KÜHN (1979, 68 Abb.16) sowie Material der Trichterbecherkultur.*
Verbleib ?
STRAHL 1990, 20 Kat.-Nr.97.

174. Flögeln Fpl.131, Gde. Flögeln, Kr. Cuxhaven.
Vierjochiges Ganggrab unter Grabhügel.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
MfV Berlin II 602a.
STRAHL 1990, 21 Kat.-Nr.99A.

175. Freschluneberg Fpl.71, Gde. Lunestedt, Kr. Cuxhaven.
Flachgrab (?).
Scherben eines in Zahnstock- und Fingernagelkniffechnik verzierten Glockenbechers. In Zahnstocktechnik verzierter Glockenbecher. *Aus demselben Grab stammen ein unverzierter Napf und eine Flintsichel (bei Nachsuche gefunden).*
Mus. Bederkesa IV/41/63, IV/42/63.
STRAHL 1990, 35f. Kat.-Nr.170, Taf.6,1-2.

176. Garlstedt Fpl.102, Stadt Osterholz-Scharmbeck, Kr. Osterholz.
Bestattung in Grabhügel.
Sieben gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16). *Aus demselben Hügel stammen der Schneideneinsatz für ein Flintschwert (?), ein Kupferfragment, eine weitere Flintpfeilspitze sowie Material der Trichterbecherkultur.*
Mus. Osterholz-Scharmbeck.
STRAHL 1990, 90 Kat.-Nr.430.

177. Glüsingen, Fpl.1-2 „Hitzenberg“ Gde. Seevetal, Kr. Harburg.
Einzelfunde von mehrperiodiger Siedlungsstelle seit der Trichterbecherkultur.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16). *Von derselben Fundstelle stammen „Scherben der Einzelgrabkultur, mehrere jütländische Streitäxte, zahlreiche Flintoval- und Flintrechteckbeile, Flintdolche und Flintpfeilspitzen.*
Helms-Museum Hamburg 62332.
STRAHL 1990, 78 Kat.-Nr.364.

178. Grethem Fpl.9, Gde. Grethem, Kr. Soltau-Fallingbostel.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
LM Hannover 322:65.
STRAHL 1990, 168 Kat.-Nr.755.

179. Hahnenknoop Fpl.8, Gde. Loxstedt.
Einzelfund (Flachgrab?).
Scherben eines in Zahnstocktechnik verzierten Bechers.
Mus. Bederkesa IV/120/70.
STRAHL 1990, 35 Kat.-Nr.164, Taf.5,2.

180. Hammah Fpl.15 „Ostermoor“, Gde. Hammah, Kr. Stade.
Einzelfund.
In Zahnstocktechnik verzierte Scherben. *Von derselben Fundstelle stammen noch weitere verzierte und unverzierte Scherben.*
Mus. Stade 4704.
STRAHL 1990, 208 Kat.-Nr.930D, Taf.97,3.

181. Harrendorf Fpl.48, Gde. Bramstedt, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa.
STRAHL 1990, 14 Kat.-Nr.59B.

182. Heine Fpl.1, Gde. Wulsbüttel, Kr. Cuxhaven.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Bederkesa IV/64/60.
STRAHL 1990, 45 Kat.-Nr.222, Taf.6,11.

183. Helvesiek Fpl.81, Gde. Helvesiek, Kr. Rotenburg/W.
Grabhügel, Phase 1-4, Bestattung 1 („Bodengrab“).
In Ritz- und Zahnstocktechnik verzierter Glockenbecher mit schmaler plastischer Leiste. *Zu derselben Bestattung gehört ein weiterer verzierter Becher.*
LM Hannover 93:55.
STRAHL 1990, 125f. Kat.-Nr.560B, Taf.47,3.

184. Hittbergen „Roggenberg“, Kr. Lüneburg.
Einzelfunde.
Zonenartig in Zahnstocktechnik verzierte Scherben.
Mus. Lüneburg 4858.
STEGEN 1942, 48 Kat.-Nr.4, Taf.8,2-4.

185. Hohnerdingen Fpl.62, Stadt Walsrode, Kr. Soltau-Fallingbostel.
Einzelfund.
Zwei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Preuß ?
STRAHL 1990, 181 Kat.-Nr.834B.

186. Hollenbeck, Flecken Harsefeld, Kr. Stade.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Stade 4018.
STRAHL 1990, 211 Kat.-Nr.938B.

187. Holßel Fpl.15 (?), Gde. Langen, Kreis Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa IV/647/61.
STRAHL 1990, 29 Kat.-Nr.138G.

188. Holte-Spangen „Hölter Höhe", Stadt Cuxhaven, Kr. Cuxhaven.
Einzelfunde.
Zwei gestielte Flintpfeilspitzen Typ 5b nach KÜHN (1979, 68 Abb.16). *Von derselben Fundstelle stammen noch ein dickblattiges und ein dünnblattiges Flintrechteckbeil.*
Slg. Langner 1952 u. 4654.
STRAHL 1990, 17 Kat.-Nr.77A.

189. Holtebüttel Fpl.19, Flecken Langwedel, Kr. Verden. Mbl.3021, R. ^{35}15380, H. ^{58}70890.
Zerstörter Grabhügel, Phase 1 („Flachgrab ?"), Bestattung 1.
Drei in Zahnstocktechnik verzierte Scherben.
LM Hannover 813:65.
STRAHL 1990, 241 Kat.-Nr.1046E, Taf.110,11.

190. Huden Fpl.5, Gde. Stadt Haselünne, Kr. Emsland.
Fundstreuung.
Gestielte Flintpfeilspitze Typ 5a/b (?) nach KÜHN (1979, 68 Abb.16).
Priv.-Bes. A. Behlke.
FUNDCHRONIK 1995, 248 Kat.-Nr.169 (A. Kaltofen).

191. Hülseberg Fpl.39, Stadt Osterholz-Scharmbeck, Kr. Osterholz.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Osterholz-Scharmbeck.
STRAHL 1990, 91 Kat.-Nr.435.

192. Hymendorf Fpl.16, Gde. Langen, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa IV/645/61.
STRAHL 1990, 29 Kat.-Nr.139.

193. Issendorf, Flecken Harsefeld, Kr. Stade.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe. Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16). *Von derselben Fundstelle stammen noch weitere verzierte Scherben, Streitaxt, ein dünnblattiges Flintrechteckbeil, zwei Flintpfeilspitzen und andere Flintartefakte sowie Scherben der Trichterbecherkultur.*
Mus. Stade (Slg. Reese). Mus. Stade 2278.
STRAHL 1990 211 Kat.-Nr.940B, Taf.96,5.

194. Jettebruch, Stadt Fallingbostel, Kr. Soltau-Fallingbostel.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
LM Hannover 433:36.
STRAHL 1990, 168 Kat.-Nr.747B.

195. Klein Henstedt Fpl.36, Gde. Prinzhöfte, Kr. Oldenburg.
Einzelfund.
In Zahnstocktechnik verzierte Randscherbe.
Staatl. Mus. Oldenburg.
FUNDCHRONIK 1996, 287 Kat.-Nr.120 (F.-W. Wulf).

196. Lintig Fpl.88, Gde. Lintig, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Bederkesa IV/646/61.
STRAHL 1990, 34 Kat.-Nr.159.

197. Logabirum, Kr. Leer „Sieben Berge".
Grabhügel (?).
Zonenartig in Zahnstocktechnik verzierter Glockenbecher.
Mus. Leer.
STEGEN 1942, 50 Kat.-Nr.6, Abb.4.

198. Logabirumerfeld, Kr. Leer.
Einzelfund (?).
Zonenartig in Kreuzschraffur verzierter Glockenbecher.
Mus. Leer 72.
STEGEN 1942, 50 Kat.-Nr.7, Abb.3.

199. Luhmühlen Fpl.5, Gde. Salzhausen, Kr. Harburg.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Helms-Museum Hamburg 63074.
STRAHL 1990, 77 Kat.-Nr.354.

200. Maschen, Gde. Seevetal, Kr. Harburg.
Grabhügel.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Helms-Museum Hamburg MfV 1937:502,1.
STRAHL 1990, 79 Kat.-Nr.370A.

201. Masendorf, Kr. Uelzen.
Einzelfund (?).
In Zahnstocktechnik (?) verzierter Glockenbecher.
Verschollen.
STEGEN 1942, 51 Kat.-Nr.8, Abb.5.

202. Medingen Fpl.53, Gde. Bad Bevensen, Kr. Uelzen.
Siedlung.
In Zahnstocktechnik verzierte Scherben. Drei gestielte Flintpfeilspitzen.
LM Hannover 176:92.
OA IfD Hannover.

203. Moorausmoor, Gde. Stinstedt, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Lamstedt (?).
STRAHL 1990, 40 Kat.-Nr.202.

204. Neerstedt, Gde. Dötlingen, Kr. Oldenburg.
Grabfund (?).
Zonenartig in Zahnstocktechnik verzierter Becher. Armschutzplatte. Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16). Zwei in Zahnstocktechnik verzierte Scherben.
Mus. Oldenburg 5627/1.
STEGEN 1942, 52ff. Kat.-Nr.151, Abb.9.

205. Neuenkirchen, Gde. Neuenkirchen, Kr. Soltau-Fallingbostel.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Slg. Ungnade.
STRAHL 1990, 170 Kat.-Nr.769C.

206. Neuenkruge, Gde. Wiefelstede, Kr. Ammerland.
Einzelfund (?).
Zonenartig verzierter Glockenbecher.
Mus. Oldenburg 5528.
STEGEN 1942, 54 Kat.-Nr.16, Taf.8,1.

207. Norddrebber Fpl.8, Gde. Gilten, Kr. Soltau-Fallingbostel.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
LM Hannover 237:65.
STRAHL 1990, 168 Kat.-Nr.753.

208. Oberndorfmark, Bez. Osterheide, Kr. Soltau-Fallingbostel.
Grabhügel (?), Bestattung in Ganggrab.
Schnurverzierter Becher.
LM Hannover 1636a:38.
STRAHL 1990, 171f. Kat.-Nr.777C, Taf.74,3.

209. Oldendorf, Kr. Lüneburg.
Großsteingrab.
Gestielte Flintpfeilspitze.
Mus. Lüneburg.
KÖRNER / LAUX 1980, 158 Abb.18,2.

210. Osterbrock, Kr. Emsland.
Grabhügel der Einzelgrabkultur.
In Schnurabdrucktechnik verzierter Zonenbecher.
Verbleib?
GENRICH 1938, 47, Taf.1a.

211. Ostereistedt, Gde. Ostereistedt, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Maack.
STRAHL 1990, 135 Kat.-Nr.595.

212. Ostenwalde, Gde. Werlte, Kr. Emsland.
Großsteingrab.
FNr.11: unverzierter Glockenbecher, FNr.13-14, 16-19: Reste von in Zahnstocktechnik verzierten Glockenbechern.
Verbleib?
TEMPEL 1978, 17ff., Taf.5B, 1-8.

213. Otersen Fpl.23, Gde. Kirchlinteln, Kr. Verden. Mbl. 3122, R. ^{35}23340, H. ^{58}57240.
Zerstörter Grabhügel.
In Häkelschnurtechnik verzierter Becher. *Aus demselben Hügel stammt ein Bronzedolch.*
Mus. Verden V 55.
STRAHL 1990, 235 Kat.-Nr.1031, Taf.108,9.

214. Otterstedt „Auf dem Raden“, Flecken Ottersberg, Kr. Verden.
Einzelfund.
Zwei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Gerken.
STRAHL 1990, 244 Kat.-Nr.1062B.

215. Plate, Gde. Lüchow, Kr. Lüchow-Dannenberg.
Steinsetzung.
Zonenartig mit Schnurabdrücken verzierte Scherbe.
Verbleib?
OA Archiv Lüchow.

216. Quelkhorn, Flecken Ottersberg, Kr. Verden.
Einzelfund.
In Wickelschnurtechnik verzierter Glockenbecher.
LM Hannover 2575.
STRAHL 1990, 244 Kat.-Nr.1063B, Taf.109,6.

217. Regesbostel Fpl.7, Gde. Regesbostel, Kr. Harburg.
Bestattung in zerstörtem Ganggrab.
In Zahnstocktechnik verzierte Becherscherben. *Aus demselben Grab stammen weitere verzierte Becherscherben, ein Flintdolch, Flintspanklingen sowie Material der Trichterbecher- und Kugelamphorenkultur.*
Helms-Museum Hamburg V 65:219.
STRAHL 1990, 72f. Kat.-Nr.338E, Taf.22,2.

218. Sahlenburg, Stadt Cuxhaven, Kr. Cuxhaven.
Einzelfunde.
Drei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Cuxhaven 6121, 6122, 5684.
STRAHL 1990, 18 Kat.-Nr.85.

219. Sasendorf Fpl.2, Gde. Bad Bevensen, Kr. Uelzen.
Siedlung.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16). *Von demselben Fundplatz stammen ein Flintdolchfragment, Flint- und Felsgesteinbeile sowie Beilfragmente, Fragmente von Felsgesteinäxten und zahlreiche weitere Flintartefakte.*
LM Hannover 26836.
OA IfD Hannover.

220. Sassenholz „Hollenbeck“, Gde. Heeslingen, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Müller-Brauel 600 (verloren).
STRAHL 1990, 122 Kat.-Nr.550C.

221. Sassenholz, Gde. Heeslingen, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Maack.
STRAHL 1990, 122 Kat.-Nr.550D.

222. Scharmbeckstotel Fpl.27, Stadt Osterholz-Scharmbeck, Kr. Osterholz.
Einzelfund.
In Zahnstocktechnik verzierte Scherbe.
Mus. Osterholz-Scharmbeck.
STRAHL 1990, 92 Kat.-Nr.442, Taf.29,6.

223. Scharnhorst, Stadt Verden, Kr. Verden. Mbl. 3021, R. ^{35}18400-18700, H. ^{58}68780-69000.
Einzelfunde.
Zwei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Verden 30b.
STRAHL 1990, 248f. Kat.-Nr.1081.

224. Schatteburg Fpl. OL-Nr.2811/1:34, Gde. Rhauderfehn, Kr. Leer.
Neolithische Bestattung.
Zonenartig in Zahnstocktechnik verzierter Glockenbecher.
OL Ostfries. Forschungsstelle Aurich.
FUNDCHRONIK 2001, 72f. Kat.-Nr.78, Abb.59 (R. Bärenfänger).

225. Scheeßel Fpl.31, Gde. Scheeßel, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16). *Von derselben Fundstelle stammen eine wickelschnurverzierte Scherbe und eine weitere Flintpfeilspitze.*
Slg. Wedel.
STRAHL 1990, 140 Kat.-Nr.623A.

226. Schnega, Gde. Schnega, Kr. Lüchow-Dannenberg.
Einzelfund.
Armschutzplatte.
Verbleib?
OA Archiv Lüchow.

227. Schwiederstorf Fpl.2, Gde. Neu Wulmstorf, Kr. Harburg.
„Grabhügel“, gestört.
In Zahnstocktechnik verzierte Scherbe. *Aus demselben Hügel stammen weitere verzierte und unverzierte Scherben überwiegend der Trichterbecherkultur.*
Helms-Museum Hamburg 69257.
STRAHL 1990, 71 Kat.-Nr.333B, Taf.20,7.

228. Sievern Fpl.78, Gde. Langen, Kr. Cuxhaven.
Aus der Umgebung eines Grabhügels (Langhügel).
In Zahnstocktechnik verzierte Scherben. *Aus demselben Bereich stammen eine wickelschnurverzierte Scherbe, ein Flintdolch und Material der Trichterbecherkultur.*
Mus. Bederkesa IV/433/61.
STRAHL 1990, 31 Kat.-Nr.149, Taf.4,8.

229. Sittensen, Gde. Sittensen, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Kaiser.
STRAHL 1990, 146 Kat.-Nr.648B.

230. Stöcken Fpl.2, Gde. Stadt Rethem, Kr. Soltau-Fallingbostel.
Mehrperiodige Siedlungsstelle.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16). *Von derselben Fundstelle stammen drei weitere Flintpfeilspitzen anderen Typs, ein Flintdolch, ein Flintbeilfragment sowie mehrere Flintartefakte.* / Archäol. Heimatkunde Soltau-Fallingbostel.
FUNDCHRONIK 2001, 75f. Kat.-Nr.84, Abb.62,4 (A. Hummelmeier, H. Nelson).

231. Tangendorf Fpl.2:1, Gde. Toppenstedt, Kr. Harburg.
Zerstörter Grabhügel.
In Zahnstocktechnik verzierte Scherben.
Helms-Museum Hamburg 65141.
STRAHL 1990, 82 Kat.-Nr.385A, Taf.27,11.

232. Tetendorf, Stadt Soltau, Kr. Soltau-Fallingbostel.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Slg. Baurichter.
STRAHL 1990, 179 Kat.-Nr.817.

233. Tiste, Gde. Tiste, Kr. Rotenburg/W.
Zerstörter Grabhügel.
In Zahnstocktechnik verzierter Becher. *Aus demselben Grab stammt vermutlich eine gemeineuropäische Hammeraxt Typ 2a.*
Slg Müller-Brauel 2000 (verloren).
STRAHL 1990, 148 Kat.-Nr.655B, Taf.57,3.

234. Tiste, Gde. Tiste, Kr. Rotenburg/W.
Gestörter Grabhügel, Phase 1.
In Zahnstocktechnik verzierte Becherscherben. *Zu derselben Phase gehören eine jütländische Streitaxt Typ F2c sowie eine Flintspanklinge.*
Slg. Müller-Brauel 1707 (verloren).
STRAHL 1990, 149 Kat.-Nr.656, Taf.58,1.

235. Tiste, Gde. Tiste, Kr. Rotenburg/W.
Zerstörter Grabhügel.
„Scherben, die anscheinend sicher einem Glockenbecher angehören."
Verbleib ?
STRAHL 1990, 149 Kat.-Nr.657D.

236. Uthlede Fpl.57, Gde. Uthlede, Kr. Cuxhaven.
Grabhügel (Phase 1, Bestattung 1)
In Zahnstocktechnik verzierter Glockenbecher. *Aus derselben Bestattung stammen noch ein unverzierter Becher und eine Bernsteinperle.*
Mus. Bederkesa
STRAHL 1990, 41 Kat.-Nr.207B, Taf.8,1.

237. Uthlede Fpl.58, Gde. Uthlede, Kr. Cuxhaven.
Zerstörter Grabhügel.
In Zahnstock- und Ritztechnik verzierter Glockenbecher.
Mus. Bederkesa.
STRAHL 1990, 41 Kat.-Nr.207D, Taf.8,5.

238. Uthlede Fpl.99, Gde. Uthlede, Kr. Cuxhaven.
Zerstörte Steinkammer.
„Glockenbecher" (?). Aus derselben Kammer stammen ein dünnblattiges Flintrechteckbeil und Material der Trichterbecherkultur.
Mus. Stade, Inv.-Nr.?
STRAHL 1990, 40f. Kat.-Nr.205.

239. Vahrendorf Fpl.1 (alt), Gde. Rosengarten, Kr. Harburg.
Siedlungsstelle.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16). *Von derselben Stelle stammen mehrere schnurverzierte Scherben, ein wohl dünnblattiges Flintrechteckbeil und weitere Flintpfeilspitzen.*
Helms-Museum Hamburg 61922.
STRAHL 1990, 76 Kat.-Nr.352A.

240. Vahrendorf Fpl.18 (alt), Gde. Rosengarten, Kr. Harburg.
Gestörter Grabhügel.
In Zahnstocktechnik verzierter Becher.
Helms-Museum Hamburg 50446.
STRAHL 1990, 75f. Kat.-Nr.351E, Taf.23,3.

241. Varel, Kr. Friesland.
Einzelfund (?).
Zonenartig verzierter Glockenbecher.
Mus. Oldenburg 5573.
STEGEN 1942, 54 Abb.6.

242. Vollersode Fpl.70, Gde. Vollersode, Kr. Osterholz.
Gestörter Grabhügel (Phase 1).
In Zahnstocktechnik verzierter Zonenbecher. *Aus demselben Hügel stammen eine Flintpfeilspitze und ein Feuerschlagstein.*
Mus. Osterholz-Scharmbeck.
STRAHL 1990, 95 Kat.-Nr.461A, Taf.29,9.

243. Wanhöden Fpl.16, Gde. Nordholz, Kr. Cuxhaven.
Grabhügel (?), zerstörtes Großsteingrab.
Armschutzplatte. *Aus demselben Grab stammen ein Flint-Querbeil und Material der Trichterbecherkultur.*
Mus. Bederkesa.
STRAHL 1990, 37 Kat.-Nr.181, Taf.6,5.

244. Wanna, Gde. Wanna, Kr. Cuxhaven.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Wanna.
STRAHL 1990, 42f. Kat.-Nr.212B.

245. Wehm, Kr. Emsland.
Grab 1.
In Zahnstocktechnik verzierter Zonenbecher.
Heimathaus Emsland, Meppen U 58:42.
SCHLICHT 1958, 140.

246. Weitzmühlen Fpl.61, Gde. Kirchlinteln, Kr. Verden.
Gestörter Grabhügel, Bestattung 2.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Verden V 1240c.
STRAHL 1990, 238 Kat.-Nr.1040A.

247. Westertimke, Gde. Westertimke, Kr. Rotenburg/W.
Grabfunde ?
Zonenartig in Zahnstocktechnik verzierter Glockenbecher. Scherben eines weiteren zonenartig in Zahnstock- und Einzeleinstichtechnik verzierten Bechers.
Slg. Jung.
STRAHL 1990, 152 Kat.-Nr.678, Taf.61,3-4.

248. **Wiepenkathen**, Stadt Stade, Kr. Stade.
Einzelfunde.
Drei gestielte Flintpfeilspitzen Typ 5a nach KÜHN (1979, 68 Abb.16).
Mus. Stade B 302. Mus. Stade B 54-55 (jetzt Heimathaus Fischerhude).
STRAHL 1990, 224 Kat.-Nr.984D.

249. **Wistedt** Fpl.27, Gde. Stadt Zeven, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Priv.-Bes. A. Gezarzick.
FUNDCHRONIK 2000, 63 Kat.-Nr.101, Abb.56,1 (W.-D. Tempel).

250. **Wistedt** Fpl.28, Gde. Stadt Zeven, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Priv.-Bes. A. Gezarzick.
FUNDCHRONIK 2000, 63 Kat.-Nr.102, Abb.56,2 (W.-D. Tempel).

251. **Wohlsdorf** Fpl.6, Gde. Scheeßel, Kr. Rotenburg/W.
Gestörter Grabhügel, Phase 1.
In Ritz- und Kerbtechnik verzierter Becher. *Zu derselben Phase gehören ein weiterer verzierter Becher, eine jütländische Streitaxt Typ B2b und eine Flintspanklinge.*
Kreisarchäologie Rotenburg.
STRAHL 1990, 141 Kat.-Nr.629, Taf.53,2.

252. **Zeven**, Stadt Zeven, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Slg. Müller-Brauel 545 (verloren).
STRAHL 1990, 157 Kat.-Nr.702B.

253. **FO** unbekannt, Kr. Rotenburg/W.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5b nach KÜHN (1979, 68 Abb.16).
Mus. Zeven 55.
STRAHL 1990, 157f. Kat.-Nr.703.

Bremen

254. **Kirchhuchting** Fpl.40, Stadt Bremen.
Einzelfund.
Gestielte Flintpfeilspitze Typ 5a nach KÜHN (1979, 68 Abb.16).
Focke-Museum Bremen 9698.
STRAHL 1990, 7 Kat.-Nr.12B.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

EIN SIEDLUNGSPLATZ DER GLOCKENBECHERKULTUR IN HAMBURG-BOBERG?

Kathrin Mertens (Kiel, Germany)

Das in der Vorgeschichte – und besonders in der Steinzeit – intensiv besiedelte Gebiet der Boberger Dünen erstreckt sich im Osten der Stadt Hamburg entlang der Bille, einem kleinen Nebenfluß der etwas weiter südlich verlaufenden Elbe (Abb. 1). Unter den zahlreichen archäologischen Fundstellen im Dünenbereich befinden sich auch einige mit endneolithischem Fundmaterial. Besonders eine dieser Fundstellen hat reichhaltiges Material glockenbecherartiger Prägung hervorgebracht.

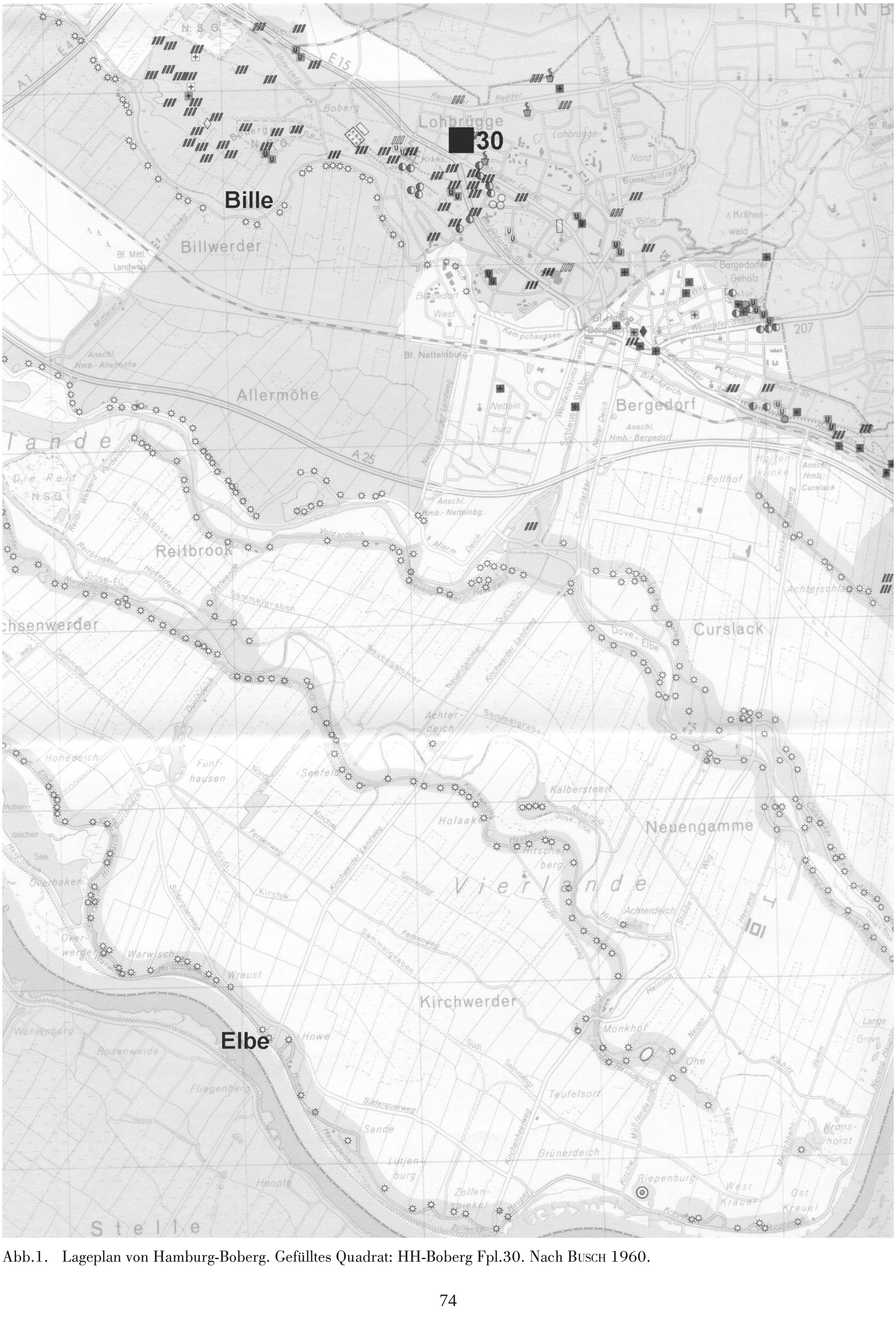
Forschungsgeschichte

Seit den 80er Jahren des 19. Jahrhunderts wurde das Gelände der Boberger Dünen von zahlreichen Privatsammlern systematisch abgesucht; wissenschaftliche Untersuchungen von offizieller Seite fanden auf Grund von Kompetenzstreitigkeiten jedoch lange Zeit nicht statt: Bis 1938 gehörte Boberg zu Schleswig-Holstein, das sich für diesen randlich gelegenen Fundplatz zwar selber nicht interessierte, den Hamburger Forschern aber dennoch keine Genehmigung für eine Fundbergung erteilen wollte (SCHINDLER 1953/1955, 1f.). Daher sind die Boberger Funde bis heute auf zahlreiche Museen und Privatsammler verteilt und inzwischen teilweise verschollen oder verloren. Den Bemühungen von R. SCHINDLER (1953/1955; 1960) ist es zu verdanken, daß die Tätigkeit der Privatsammler weitgehend dokumentiert und somit ein guter Überblick über den Verbleib der meisten Boberger Funde gegeben ist.

Im Jahre 1938/39 begann M.M. Lienau gemeinsam mit einigen Sammlern mit der ersten archäologischen Ausgrabung einer steinzeitlichen Siedlungsstelle in den Boberger Dünen (Hamburg-Boberg Fpl.12). 1951 führte er hier eine zweite, systematische Grabung durch. Wenn dabei auch keine Hausgrundrisse oder andere Siedlungsbefunde zum Vorschein kamen – Holzkohle konnte allerdings auf der gesamten Fläche nachgewiesen werden (SCHINDLER 1960, 84) –, so waren die geologischen Beobachtungen doch interessant: Die Fundstelle, die sich am Übergang einer Düne zu sumpfigem Wiesengelände direkt am Marschenrand befand, lag unter einer 0,3–0,5 m dicken Schlickschicht, einer etwa 0,25 m tiefen Schicht aus unverwittertem Klei und einer bis zu 0,6 m starken Bruchwaldtorfschicht aus Klei mit organischen und pflanzlichen Beimengungen wie Wurzeln, Ästen, Haselnüssen und auch bereits ersten Flintartefakten. Die eigentliche, ca. 0,2 m mächtige Fundschicht befand sich also in etwa 0,6–1,0 m Tiefe und bestand aus holzkohlehaltigem Dünensand (Abb. 2). Sie war zur Zeit der Auffindung offensichtlich völlig ungestört. Die heutige Marsch dürfte zur Zeit der neolithischen Besiedlung noch nicht existiert haben; statt dessen wird hier ein Gewässer, wohl ein Nebenarm der Bille oder der Elbe, verlaufen sein (SCHINDLER 1960, 84).

Mit dem Fundplatz Boberg 12 liegt ein offenbar in erster Linie endneolithischer Siedlungsplatz vor. Neben einigen unspezifischen Flintartefakten und wenigen der Trichterbecherkultur zuzurechnenden Scherben fanden sich unter der Keramik ansonsten überwiegend endneolithische Stücke. Zwei von diesen waren mit Schnurabdrücken, acht mit Stacheldrahtmuster und drei mit plastischen Rillen versehen; ein Großteil der Keramik aus dieser Zeitstufe war jedoch in glockenbecherartiger Weise verziert. SCHINDLER (1960, 84) kennt „fünf [Scherben] mit Dreiecksverzierung (schraffierte Dreiecke) in Zahnstockmanier, 25 Zonenbecherscherben mit Linienverzierung, Kreuzschraffur, Leiter- und Zickzackmuster in Zahnstockmanier“. Leider ist der Verbleib dieser Funde derzeit ungeklärt, so daß sie an dieser Stelle nicht näher beschrieben werden können. Einzelne verzierte Scherben der Fundstelle 12 sind aber bei SCHINDLER (1953/1955, Taf. 13:1-30) abgebildet.

Eine deutlich größere Anzahl verzierter Scherben,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Bille
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Ochsenwerder
Fünfhausen
Nettelnburg
Bergedorf West
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Abb.1. Lageplan von Hamburg-Boberg. Gefülltes Quadrat: HH-Boberg Fpl.30. Nach Busch 1960.

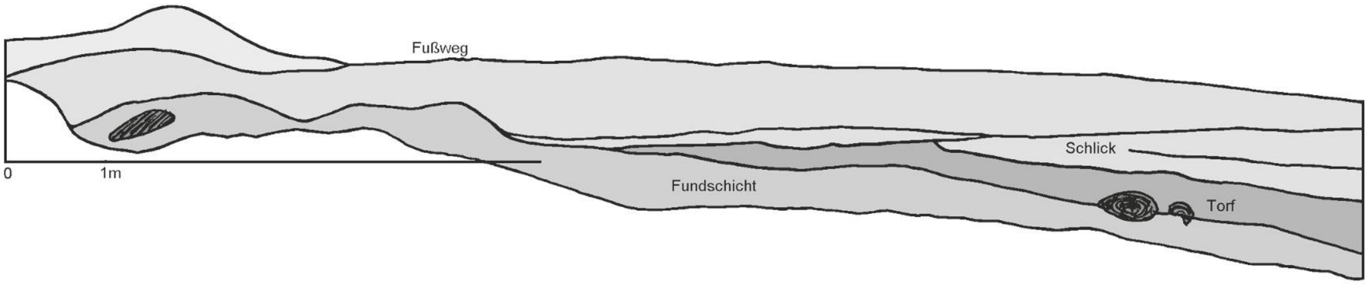

Abb.2. Hamburg-Boberg Fpl.12. Schichtenplan. Nach Schindler 1960.

bei denen sich das gesamte Spektrum der eben erwähnten Ornamentik wiederfindet, stammt jedoch von dem etwas weiter östlich gelegenen Fundplatz Hamburg-Boberg 30. Dieser ist zwar nie gegraben, dafür aber über viele Jahre hinweg systematisch abgesucht worden. G. Schwantes (1936, 92, Taf. 4), K.W. Struve (1955, Taf. 22) und R. Schindler (1953/1955, Taf. 13:31-46) haben jeweils nur einen Bruchteil des vorhandenen Fundgutes vorgelegt (Abb. 3) – Grund genug, diesen Platz einmal ausführlicher vorzustellen.

Die Siedlungsstelle Hamburg-Boberg Fpl.30

Der Fundplatz Hamburg-Boberg 30 (auch: Neu-Boberg; Weberade) wurde 1896 von dem Privatsammler W. Andresen entdeckt. Unter einer weitgehend bis zur Ortsteinschicht abgewehten Düne fand sich eine reiche Fundschicht, die sich über eine Fläche von mehreren Morgen erstreckte. Da zunächst scheinbar überwiegend Flintpfeilspitzen sowie zahlreiche Fragmente von Feuersteinbeilen, -lanzenspitzen und -dolchen zum Vorschein kamen, nahm Andresen an, hier ein „Schlachtfeld aus der Steinzeit“ entdeckt zu haben (Andresen 1897-1917, Bd. 5, 6; Schindler 1960, 87)[1]. Das planmäßige Absuchen des Fundplatzes ergab in den Folgejahren jedoch das übliche Spektrum einer „steinzeitlichen Wohn- und Werkstätte“ (wohl erstmalig Andresen 1897-1917, Bd. 5, 45), nämlich zahlreiche Flintartefakte sowie verzierte und unverzierte Scherben. Seine Funde gab Andresen offenbar abhängig von der Bezahlung überwiegend im Hamburger, zum Teil aber auch im Kieler Museum ab (OA HH-Boberg 30; Schindler 1960, 88). Da er über all seine Begehungen und Grabungen Tagebuch führte, läßt sich gut verfolgen, daß Andresen die Siedlung von Neu-Boberg über 20 Jahre hinweg regelmäßig aufsuchte und immer wieder neue Fundstücke auflesen konnte.

Auch andere Privatsammler suchten diesen Platz ab. Die Funde aus der Sammlung Behrens gingen in den Besitz des Museums für Hamburgische Geschichte über (Schindler 1960, 88) und werden heute im Magazin des Helms-Museums verwahrt. Der derzeitige Verbleib der Privatsammlung H. Schultz (Fuhlsbüttel) ist unbekannt.

Zur Bearbeitung lagen 310 endneolithische Scherben vor[2], die mehr oder weniger eindeutig mit der Glockenbecherkultur in Beziehung gesetzt werden können. Ganze Gefäße oder größere Bruchstücke, die auf Gefäßformen schließen lassen könnten, fehlen dabei inzwischen leider völlig, auch gibt es kaum zusammenpassende Scherben. Schindler (1960, 88) weist auf ein ehemals vorhandenes becherförmiges Gefäß hin, das vermutlich im Krieg verlorengegangen ist; nähere Angaben liegen jedoch nicht vor. Somit ist eine Bewertung der Keramik heute nur noch anhand der Machart und der Ornamentik möglich.

Die Scherben haben allesamt eine braune Farbe, wobei das Spektrum von einem hellen Braun über rotbraun bis hin zu schwarzbraun reicht. Die Magerung besteht, soweit durch einfaches Ansehen zu beurteilen, durchweg aus – teilweise quarzithaltigem – Sand, der von seiner Beschaffenheit her jedoch sehr unterschiedlich ist und von feinkörnigem bis zu grobem, kiesigem Material reicht.

Die vorherrschende Verzierungstechnik ist die Zahnstocktechnik, vereinzelt kommen aber auch Schnurverzierung, Ritzverzierung, Meißel- und Einzeleinstichtechnik vor.

Das Musterspektrum sieht folgendermaßen aus (Abb. 4): Es überwiegen mit 78 Exemplaren schlicht mit einer oder mehreren parallelen Linien in Zahnstocktechnik verzierte Scherben (Abb. 5:1-9). Unter

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[1] Ganz herzlich bedanken möchte ich mich bei Herrn Dr. Hoika vom Landesmuseum Schleswig, der mir Einsicht in die Originaltagebücher Andresens gewährte.

[2] Davon befinden sich heute 224 im Hamburger Helms-Museum (MHG 1952:122 und o.Nr. [evtl. MfV 1896:235-239?]) und 86 im Landesmuseum Schleswig (K.S.21661). Leider waren einige der in der Literatur abgebildeten Scherben nicht auffindbar (vgl. Struve 1955, Taf.22: 7-8,10-11,15,22,26,30), so daß auch die hier vorgelegte Fundzusammenstellung vermutlich nicht vollständig sein wird. Für die Möglichkeit, alle vorhandenen Funde zu sichten und aufzunehmen, danke ich Herrn Dr. Merkel vom Hamburger Helms-Museum und Frau Dr. Ulbricht vom Landesmuseum Schleswig ganz herzlich.

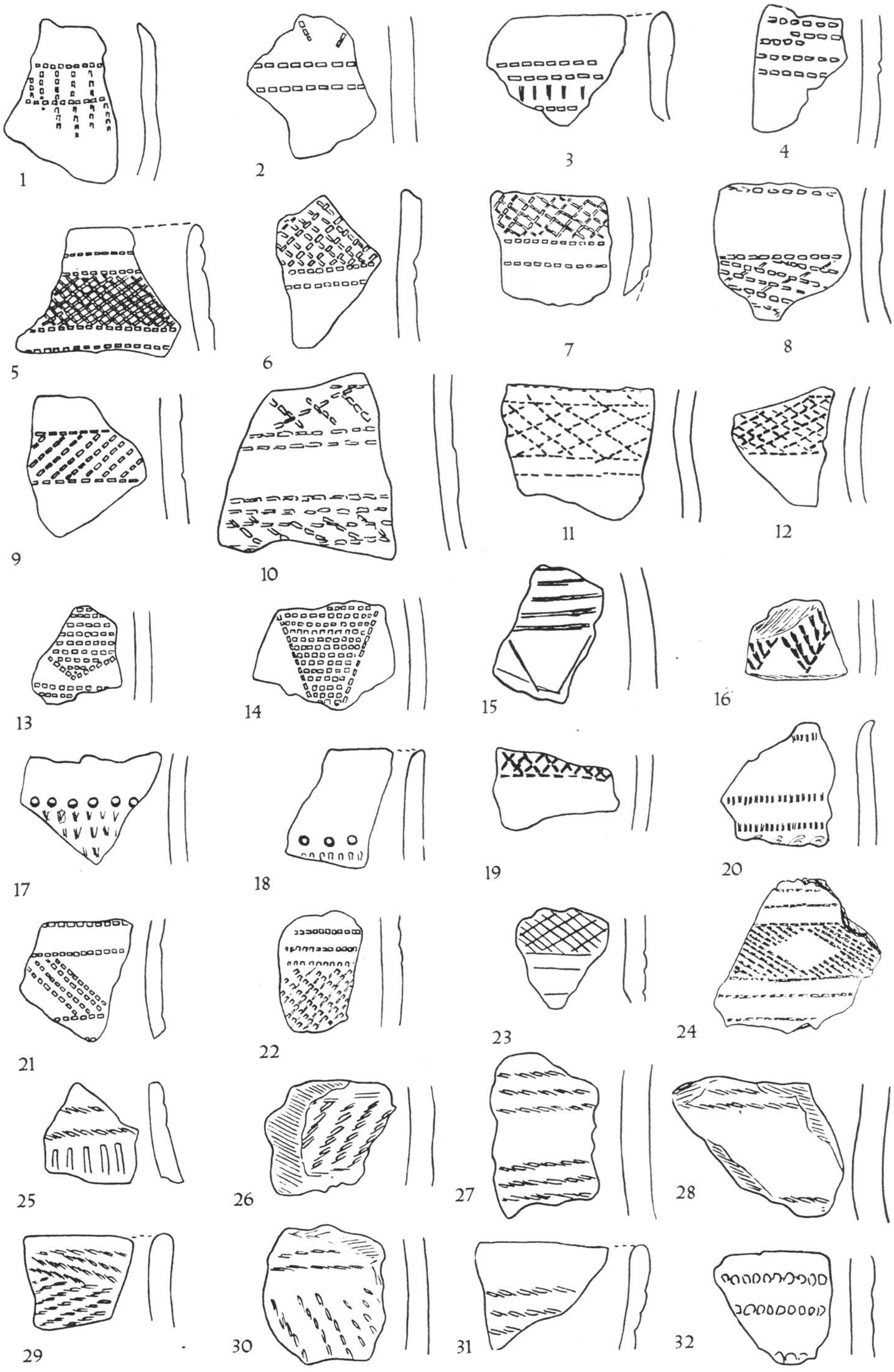
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Abb. 3. Auswahl von Scherben des Fundplatzes HH-Boberg 30. Struve 1955, Taf.22.

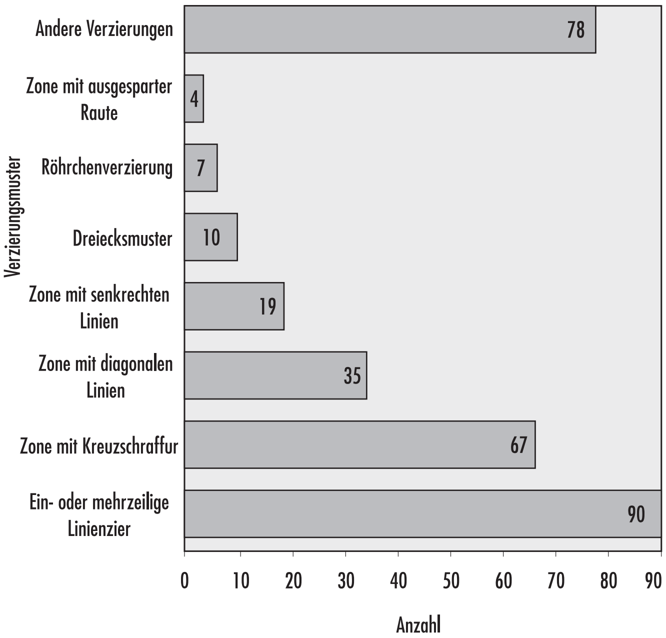


Abb.4. Verzierungsmuster auf den glockenbecherartigen Scherben von HH-Boberg, Fpl.30.

ihnen befinden sich 15 Randscherben. Zwölf weitere Scherben sind mit einer oder mehreren parallel verlaufenden Schnurlinien verziert (Abb. 5:10-12); insgesamt liegen also 90 Scherben mit diesem Muster vor.

Mit 67 Scherben, darunter acht Randstücken, ist das zonenartig gestaltete Kreuzschraffurelement am zweithäufigsten vertreten (Abb. 6:1-9). Dabei wird die Kreuzschraffur oben und unten meist durch je zwei parallele, waagerecht umlaufende Reihen begrenzt. Auch diese Verzierung ist ganz überwiegend in Zahnstocktechnik ausgeführt; herauszuheben sind jedoch sechs zum Teil zusammenpassende und eindeutig zu demselben Gefäß gehörende Scherben, deren Muster in die Gefäßwandung eingeritzt worden ist. Eine Scherbe ist weitgehend in Zahnstocktechnik ausgeführt, die von links unten nach rechts oben führenden Diagonalen sind jedoch nur mit einem schmalen Gerät eingeritzt. Diese Scherbe weist ebenso wie zwei ausschließlich zahnstockverzierte Exemplare noch deutliche Spuren einer weißen Inkrustierung auf.

Ein weiteres zonenartiges Verzierungselement tritt 35 mal in Neu-Boberg auf. Es handelt sich um eine durch waagerechte Reihen begrenzte Zone, die mit kleinen diagonalen Linien ausgefüllt ist (Abb. 7:7-12). Auch dieses Ornament ist überwiegend mit dem Zahnstock auf das Gefäß aufgetragen worden; in elf Fällen – darunter befinden sich auch zwei Randscherben – liegt aber auch Schnurverzierung vor, und einmal wurden die diagonalen Linien in Meißelstichtechnik und die Begrenzungslinien in Ritztechnik ausgeführt.

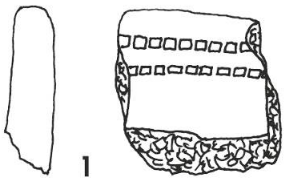
Zonen aus waagerechten Begrenzungsreihen mit senkrechten Linien dazwischen kommen 19 mal vor (Abb. 7:1-6). Sechs Scherben sind ausschließlich in Zahnstocktechnik verziert, bei den meisten, nämlich acht Exemplaren jedoch sind die senkrechten Linien als Meißeleinstiche, einmal auch als Einzeleinstiche ausgeführt. Außerdem kommen je eine in Schnur- und Meißeleinstichtechnik sowie eine in unechter Schnur- und Furchenstichtechnik ausgeführte Scherbe hinzu. Bei einigen Scherben ist die Zuordnung zum Endneolithikum allerdings nicht ganz eindeutig; es könnte sich hierbei auch um Keramik der Trichterbecherkultur handeln.

Zehn Scherben weisen ein zonenartig angeordnetes Dreiecksmuster auf, das gewöhnlich aus umlaufenden Reihen mit ausgesparten oder gefüllten Dreiecken besteht (Abb. 6:12-14). Das Ornament ist durchweg in Zahnstocktechnik ausgeführt. Allerdings sind von den zehn hier berücksichtigten Scherben drei in ihrer Zuordnung unsicher, da die Verzierung unsauber ausgeführt ist bzw. auf dem kleinen Bruchstück der Scherbe nur ein so geringer Teil des Musters erhalten ist, daß die Ansprache als Dreiecksmotiv nicht eindeutig ist; es könnte sich hierbei möglicherweise auch um eine Art mehrzeiliges Winkelband handeln.

Eine besondere Gruppe stellen die röhrchenverzierten Scherben dar (Abb. 5:13-15). Es handelt sich hierbei um sieben in Einzeleinstichtechnik verzierte Scherben, wobei das verwendete Gerät ein hohles Röhrchen gewesen sein muß, so daß kleine Kreisabdrücke entstanden sind. Andresen (1896-1917, Bd.8, 104) hebt dieses Ornament als ihm fremd hervor. Es findet sich viermal kombiniert mit umlaufenden Zahnstocklinien und dreimal in der Kombination mit Einzeleinstichen.

Als letztes Muster sei hier die Zonenverzierung mit ausgesparter Raute angeführt, die in Neu-Boberg viermal vorkommt. In der ansonsten flächig ausgefüllten Zierzone werden hier rautenförmige Flächen unverziert gelassen und dadurch herausgehoben. Nur zwei der vier zu dieser Gruppe gerechneten Scherben sind mit Sicherheit in der beschriebenen Weise verziert (Abb. 6:10-11), und zwar je einmal in Zahnstock- und einmal in Einzeleinstichtechnik. Die zwei anderen Stükke – möglicherweise auch noch ein drittes – sind so ungenau gearbeitet bzw. so unvollständig, daß das Muster nicht eindeutig zu erkennen ist. Es könnte sich auch um eine Dreiecksverzierung oder ein mehrzeiliges Winkelband handeln.

Ein großer Teil der Scherben, nämlich 78 Stücke, kann nicht einer der für Boberg klar zu umreißenden Gruppen zugeordnet werden. Neben nur einzeln auftretenden Motiven, die teilweise, wie beispielsweise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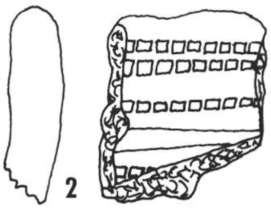
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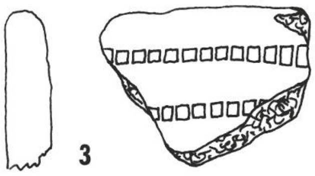
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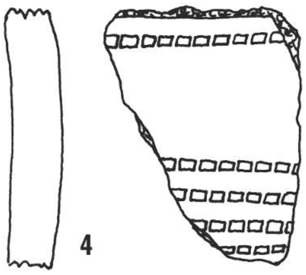
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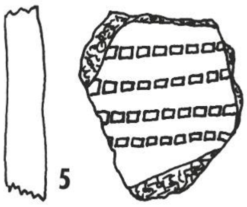
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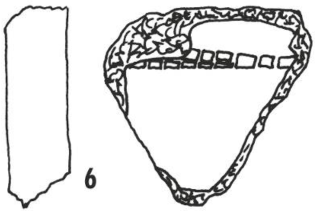
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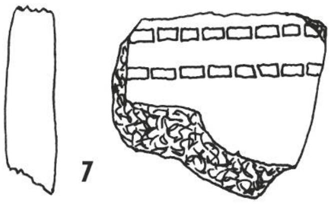
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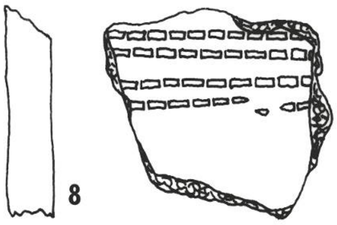
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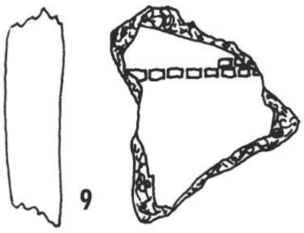
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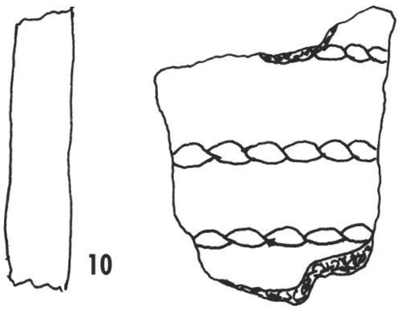
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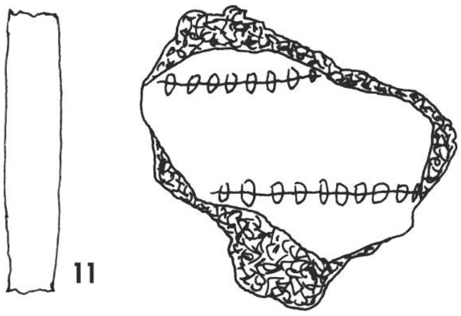
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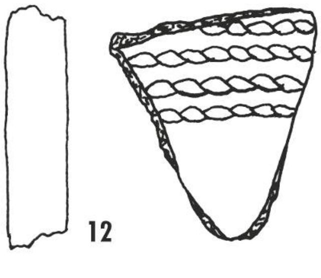
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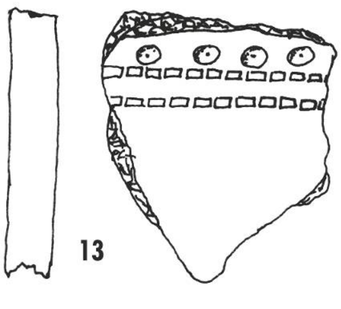
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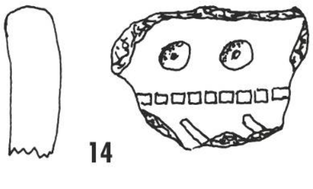
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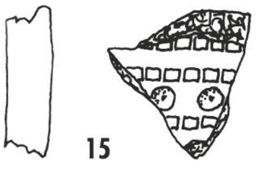
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Abb.5. Keramik aus HH-Boberg 30. 1-9, 14-15 Helms-Museum Hamburg o.Nr., 10-13 LM Schleswig K.S. 21661. M 1:1.

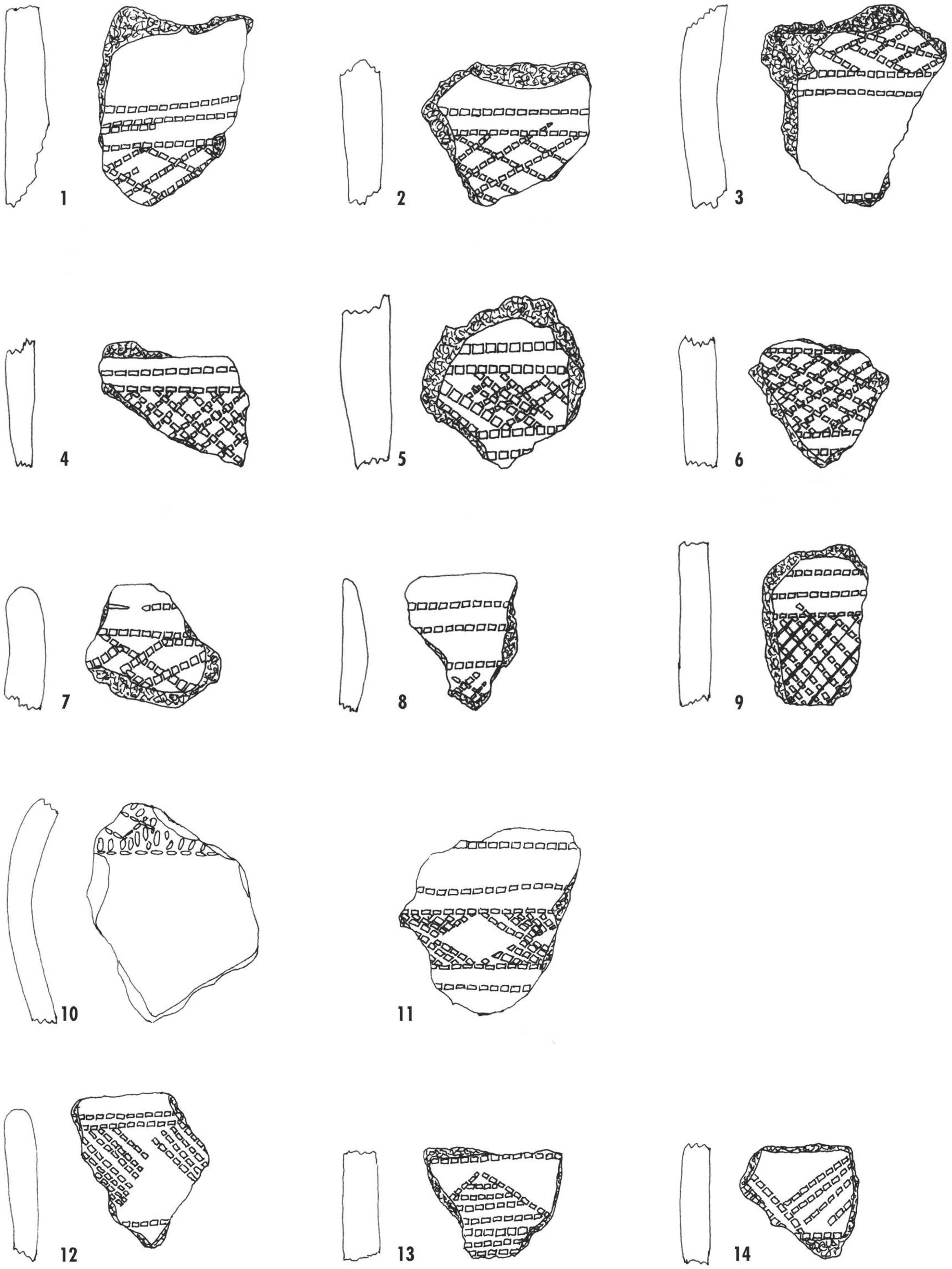
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Abb.6. Keramik aus HH-Boberg 30. 1-8, 10, 12-14 Helms-Museum Hamburg o.Nr.; 9, 13-14, LM Schleswig K.S. 21661; 11 nach Tagebuch Andresen. M 1:1.

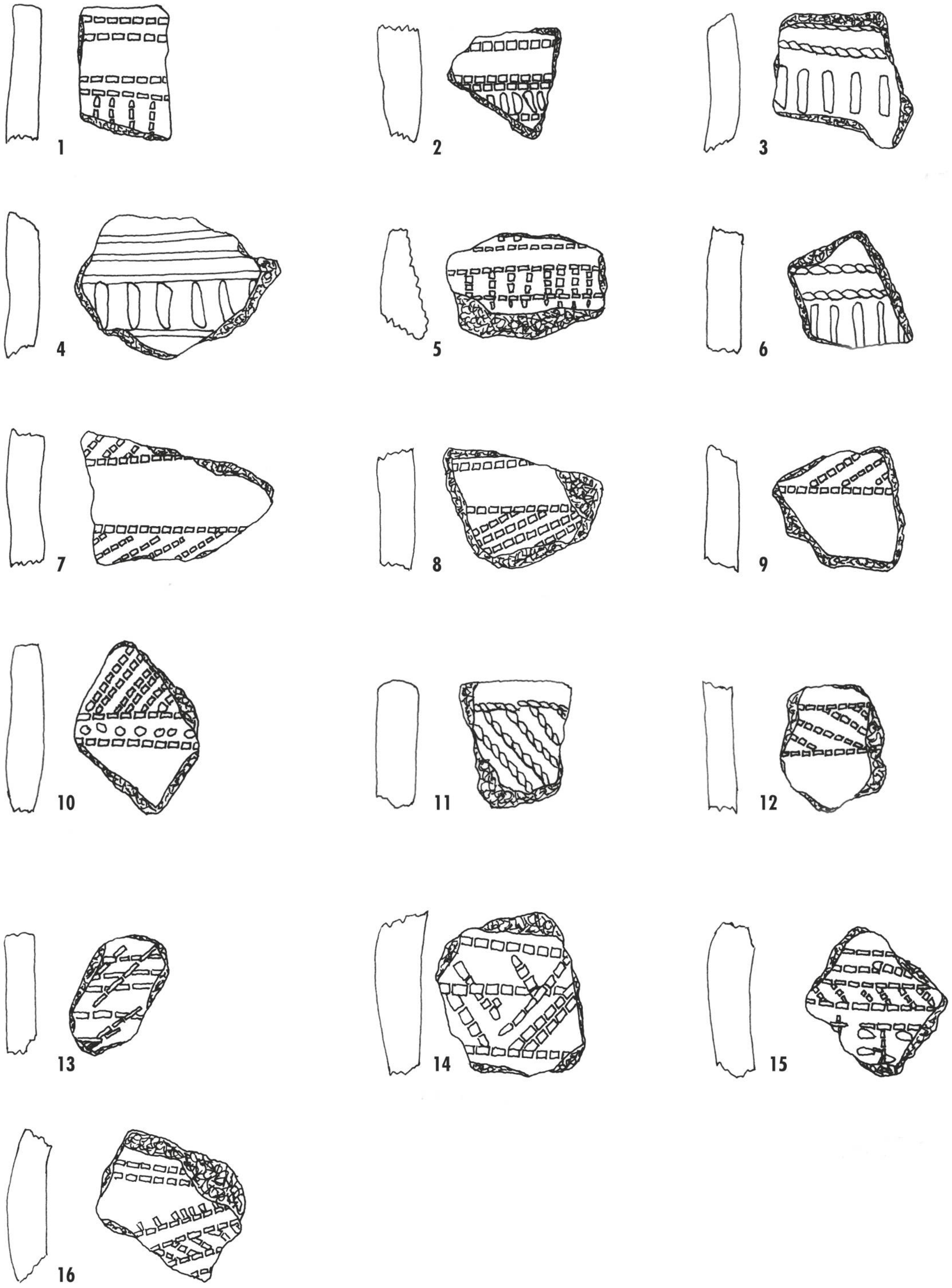
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Abb.7. Keramik aus HH-Boberg 30. 1-5, 7-11, 13-16 Helms-Museum Hamburg o.Nr.; 6, 12 LM Schleswig K.S. 21661. M 1:1.

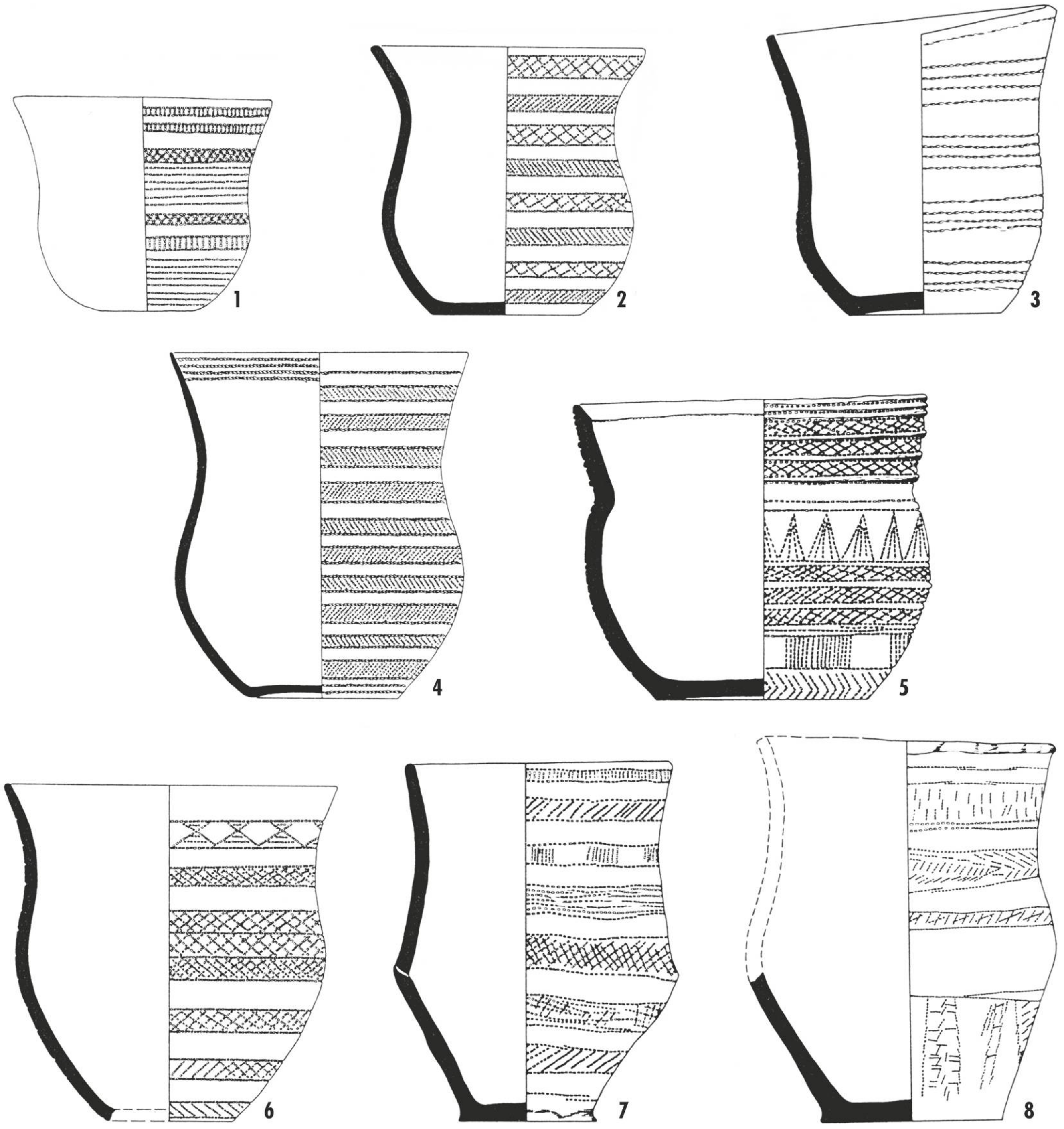

Abb.8. 1. Gabsheim, 2. Ilvesheim, 3. Wattenheim, 4. Huttenheim, 5. Plaidt, 6. Mannheim-Straßenheimerhof, 7. Weißenthurm, 8. Urmitz. GEBERS 1978.

drei fischgrätenartig verzierte Scherben, keine direkte Verbindung zur Glockenbecherkultur aufweisen, oder zwei sehr unterschiedlich in Zahnstocktechnik ausgeführten Winkelbandornamenten handelt es sich hier überwiegend um zahnstockverzierte Scherben, deren vorherrschendes Muster parallele Linien sind, die von schrägen Linien unregelmäßig unterbrochen, berührt oder geschnitten werden (Abb. 7:13-14) . Ein klares Konzept ist dabei nicht erkennbar; vielleicht handelt es sich einfach um unsauber ausgeführte Linienverzierung. Außerdem tauchen Musterkombinationen auf, deren Aussehen auf Grund der nur kleinen vorhandenen Fragmente jedoch meist nicht klar rekonstruierbar ist (Abb. 7:15-16).

Des weiteren stammen von der Siedlungsstelle Neu Boberg mehrere gestielte Flintpfeilspitzen (u.a. ANDRESEN 1896-1917, Bd.5, 101) der Typen 5a und b nach KÜHN (1979, 68f., Abb. 16).

Der Blick auf die für Norddeutschland ungewöhnlich große Menge zahnstockverzierter Scherben, die von dem Fundplatz Hamburg-Boberg 30 vorliegt, läßt auf eine deutliche Beeinflussung durch die Glocken-

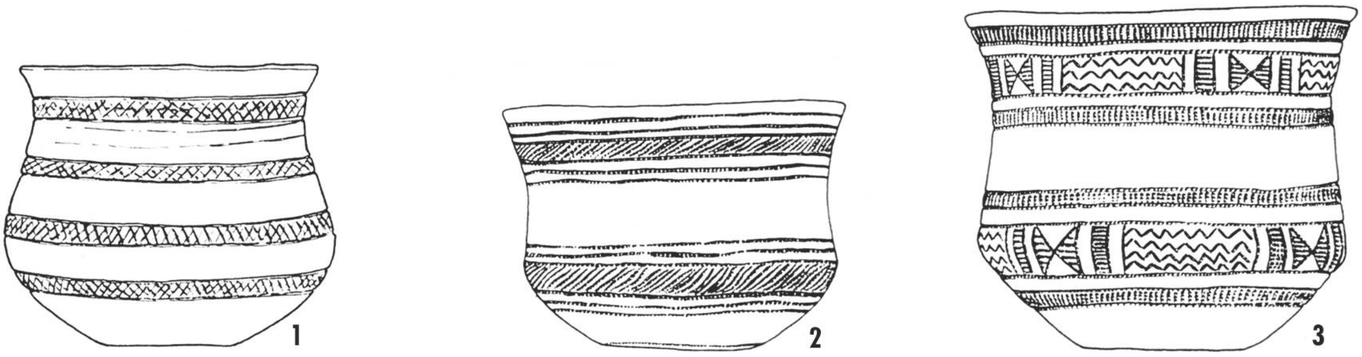

Abb.9. 1. Hohenerxleben, 2. Kötzschen, 3. Roßleben. Behrens 1973.

becherkultur schließen, zumal andere Verzierungstechniken hier kaum eine Rolle spielen. Andererseits darf eine Zahnstockzier nicht mit der direkten Anwesenheit von Glockenbecherleuten gleichgesetzt werden. Einige Becher, die von ihrer Form und Ornamentik her, aber auch durch den gesamten Fundzusammenhang der Einzelgrabkultur zuzuordnen sind, sind vollständig in Zahnstocktechnik verziert. Als Beispiele aus dem norddeutschen Raum seien hier die Becher von Regesbostel, Kr. Harburg (Strahl 1990, Taf. 23,3) und Gaarzer Hof, Kr. Bad Doberan (Jacobs 1991, Taf. 9,1) genannt (vgl. auch Mertens 2002). Offenbar haben also die Träger der Einzelgrabkultur die Zahnstocktechnik als ein separates Element aus der Glockenbecherkultur über- und in ihr eigenes Repertoire aufgenommen. Auch läßt die große Zahl von mit einfachem Linienmuster verzierten Scherben in Neu-Boberg nicht zwingend auf die unmittelbare Anwesenheit der Glockenbecherleute schließen. Dieses Ornament ist gerade in der Einzelgrabkultur und Schnurkeramik ein sehr gängiges; insbesondere Schnurbecher sind häufig ausschließlich mit mehreren parallelen, waagerecht umlaufenden Linien auf der oberen Gefäßhälfte verziert. So können auch die oben erwähnten schnurverzierten Scherben mit einfachem Linienmuster nicht unbedingt in eine Beziehung mit der Glockenbecherkultur gesetzt werden. Ihr Vorhandensein könnte vielmehr darauf schließen lassen, daß alte Verzierungsstile nun neben der herkömmlichen Ausführung auch in der neuen Ziertechnik mit einem Zahnstock ausgeführt wurden. Für diese Vermutung sprechen auch die mit ausgefüllten Dreiecken verzierten Scherben. Dieses häufig in der mitteldeutschen Schnurkeramik, aber auch in der Einzelgrabkultur vorkommende Muster findet sich hier ebenfalls in Zahnstocktechnik.

Auf der anderen Seite jedoch deuten die zahlreichen zonenverzierten Scherben durchaus auf sehr enge Beziehungen zur Glockenbecherkultur hin. Gerade die mit diagonalen – aber auch senkrechten – Linien gefüllten Zonen tauchen besonders auf Glockenbechern westlicher Herkunft regelmäßig auf (Abb. 8:4). Und auch die Kreuzschraffur (Abb. 8:2,5-6) ist ein bei echten Glockenbechern häufig angewandtes Zierelement und kommt insbesondere auf rheinischen Bechern häufiger vor (Gebers 1978). Sogar solche unregelmäßigen, keinem eindeutigen Mustertyp zuzuordnenden Ornamente, wie es sie in Boberg häufiger gibt, treten dort auf (Abb. 8:7-8). Ähnlichkeiten mit der mitteldeutschen Glockenbecherkultur, die auf Grund des möglichen Verbindungsweges Elbe denkbar wären, lassen sich zwar ebenfalls feststellen, sie sind aber – schaut man auf das bei Behrens (1973) gezeigte Verzierungsspektrum – bei weitem nicht so eindeutig (Abb. 9). Noch eine klare Verbindung zur Glockenbecherkultur stellen diejenigen Scherben dar, die mit Zonen mit ausgesparten Rauten verziert sind. Zumindest bei den beiden sehr sauber ornamentierten Exemplaren kann wohl von echter Glockenbecherkultur ausgegangen werden.

Ergebnis

Da die Verzierungen der vorgelegten Scherben vielfach nicht ausschließlich als zur Glockenbecherkultur gehörig angesprochen werden können und auch die Machart der Keramik keine sichtbaren Unterschiede zur einheimischen einzelgrabzeitlichen Ware aufweist, liegt der Schluß nahe, daß es sich bei dem vorgestellten Siedlungsplatz von Neu-Boberg nicht um eine „echte“ Siedlung der Glockenbecherkultur handelt. Auf der anderen Seite deutet aber die Tatsache, daß nahezu alle vorhandenen Verzierungsmuster in der rheinischen Glockenbecherkultur nachweisbar sind, und auch die ganz überwiegende Ausführung der Verzierungen in der für die Glockenbecherkultur typischen Zahnstocktechnik doch auf eine wesentlich größere Nähe zu dieser Kultur hin, die man möglicherweise mit Handelstätigkeiten erklären kann. Vielleicht kamen die Träger der Glockenbecherkultur aus dem Westen elbaufwärts (vgl. auch Mertens 1993, 111 Abb.3, 112) in das Gebiet der Boberger Dünen und ließen sich hier selber nieder, um von hier aus Handel mit der einheimischen Bevölkerung treiben zu können. Oder aber – und dafür spricht die Tonware, denn es liegt (bisher zumindest) noch kein typischer Glockenbecherscherben vor – wir könnten es mit einer Siedlung der einheimischen Bevölkerung zu tun haben, die in einem regelmäßigen Kontakt mit den Glockenbecherleuten stand und die neue Ware für den Handel vor Ort ins Binnenland nachmachte.

Am Ende muß die Frage, ob es sich bei der Siedlung von Hamburg-Boberg Fpl.30 – wie im Titel in den Raum gestellt – tatsächlich um eine Siedlung der Glockenbecherkultur handelt, offen bleiben. Deutlich wird jedoch die enge Verknüpfung zwischen der einheimischen Einzelgrabkultur und der fremden Glockenbecherkultur, die sich besonders in der Kombination aus offenbar heimischer Tonqualität mit der unbekannten neuen Ziertechnik widerspiegelt und auf eine direkte Verbindung zwischen beiden Kulturen und vermutlich auch den Menschen spricht.

Literatur

BEHRENS H. 1973. *Die Jungsteinzeit im Mittelelbe-Saale-Gebiet*. Veröffentlichungen des Landesmuseums Halle 27. Berlin.

BUSCH R. 1989. *Bodendenkmalpflege in Hamburg*. Veröffentlichungen des Hamburger Museums für Archäologie und die Geschichte Harburgs (Helms-Museum) 56. Neumünster.

GEBERS W. 1978. *Endneolithikum und Frühbronzezeit im Mittelrheingebiet. Katalog*. Saarbrücker Beiträge zur Altertumskunde 27. Bonn.

JACOBS J. 1991. *Die Einzelgrabkultur in Mecklenburg-Vorpommern*. Beiträge zur Ur- und Frühgeschichte in Mecklenburg-Vorpommern 24. Schwerin.

KÜHN H. 1979. *Das Spätneolithikum in Schleswig-Holstein*. Offa-Bücher 40. Neumünster.

MERTENS K. 1993. Ein Dolch der Glockenbecherkultur aus Achterdeich, Gem. Stelle, Kreis Harburg. *Hammaburg* N.F.10, 105-114.

MERTENS K. 2002. Einflüsse der Glockenbecherkultur in Norddeutschland. In: CZEBRESZUK J. / SZMYT M. (eds.), *The Northeast Frontier of Bell Beakers*, in diesem Band.

SCHINDLER R. 1953/55. Die Entdeckung zweier jungsteinzeitlicher Wohnplätze unter dem Marschenschlick im Vorgelände der Boberger Dünen und ihre Bedeutung für die Steinzeitforschung Nordwestdeutschlands. *Hammaburg* 4, 1-17.

SCHINDLER R. 1960. *Die Bodenaltertümer der Freien und Hansestadt Hamburg*. Veröffentlichungen des Museums für Hamburgische Geschichte. Abteilung Bodendenkmalpflege 1. Hamburg.

SCHWANTES G. 1936. Der neolithische Urnenfriedhof von Sande. In: *Festschrift zur Hundertjahrfeier des Museums vorgeschichtlicher Altertümer in Kiel*, 79-92. Neumünster.

STRAHL E. 1990. *Das Endneolithikum im Elb-Weser-Dreieck*. Teil 1-3. Veröffentlichungen der urgeschichtlichen Sammlungen des Landesmuseums zu Hannover 36. Hildesheim.

STRUVE K.W. 1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen*. Offa-Bücher 11. Neumünster.

Weitere Quellen:

ANDRESEN W. 1897-1917. *Tagebücher W. Andresen*. Archiv des Archäologischen Landesmuseums Schleswig.

OA HH-Boberg 30. *Ortsakte Hamburg-Boberg Fpl.30*. Archiv des Helms-Museums Hamburg, Abteilung Bodendenkmalpflege.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

GLOCKENBECHEREINFLÜSSE UND REGIONALE GLIEDERUNG NORDOSTDEUTSCHLANDS IM SPÄTNEOLITHIKUM

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Vorbemerkung

Über den bescheidenen Umfang der Einflüsse von Seiten der Glockenbecherkultur auf den nordostdeutschen Raum sind sich die meisten Bearbeiter einig. Unterschiedlich beurteilt wird dagegen, aus welchen Räumen der Glockenbecherkultur diese Einflüsse stammen[1]. Die Bewertung dieses Aspektes soll stärker als bisher vor dem Hintergrund der Gliederung der regionalen Siedlungslandschaft erfolgen und der Frage nach einer Kontinuität oder dem Wandel von Interaktionsräumen nachgehen, in denen die Diffusion der Glockenbecherelemente erfolgte[2].

Das nordostdeutsche Fundmaterial aus der Zeit der Glockenbecherkultur – Einzelgrabkultur – Spätneolithikum – Frühe Bronzezeit

Das Fundmaterial aus der Zeit der Glockenbecherkultur um 2400–2000 v.Chr. ist in Nordostdeutschland heterogen zusammengesetzt[3]. Hierzu zählen Funde der späten Einzelgrabkultur und der Oderschnurkeramik wie auch das durch die lanzettförmigen Feuersteindolche definierte spätneolithische Material. Ins ausgehende 3. Jahrtausend v.Chr. datieren zugleich die frühesten frühbronzezeitlichen Metallartfakte[4]. Eine angemessene Bewertung der Einflüsse von Seiten der Glockenbecherkultur auf den nordostdeutschen Raum erfordert eine Berücksichtigung der unterschiedlichen zeitgleichen Kulturen. Wenngleich zum umfangreichen Fundmaterial dieser Zeit monographische separate Aufarbeitungen vorliegen, ist eine umfassende „kulturübergreifende Analyse“ der späten Einzelgrabkultur und des spätneolithischen Fundmaterials nach wie vor ein Desiderat der Forschung[5]. Für den Übergang vom Spätneolithikum zur Frühen Bronzezeit sind Grundzüge der Entwicklung aufgezeigt, aber auch hier wurde der Einfluß der Glockenbecherkultur und die Funde der Oderschnurkeramik bislang nicht ausreichend untersucht (RASSMANN 1993; 2001). Ein weiteres Defizit der vorliegenden monographischen Fundaufarbeitungen ist der Umstand, daß sie sich auf Hauptbestandteile des einzelgrab- bis frühbronzezeitlichen Materials konzentrieren, d. h. für die Einzelgrabkultur vor allem auf die Äxte und für das Spätneolithikum auf die Feuersteindolche. Von den zahlreichen allgemein ins Neolithikum gestellten Steingeräten wird sich jedoch noch mancher Gerätetyp genauer datieren lassen und in das ausgehende Neolithikum zu stellen sein, wie es R. Konczak exemplarisch mit den von ihm ins Spätneolithikum datierten kantenretuschierten Einsatzstücken zeigen konnte (KONCZAK 1998). Die große Bedeutung der Steingeräte konnte bereits vor mehr als drei Jahrzehnten G. Neumann bei seiner Auseinandersetzung mit dem Problem „Siedlungen und Glockenbecherkultur in Thüringen" aufzeigen (NEUMANN 1969, 131 ff.).

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[1] Die Begriffe „Einflüsse der Glockenbecherkultur“ und „Glockenbechereinflüsse“ werden synonym gebraucht und beschreiben allgemein das Auftreten von Glockenbecherelementen. Dazu zählen zum einen Gegenstände die für die Glockenbecherkultur in ihrem engeren Verbreitungsgebiet charakteristisch sind wie Glockenbecher und Armschutzplatten und zum anderen für die Glockenbecherkeramik charakteristische Verzierungstechniken und Ornamente.

[2] Unter Interaktionsraum wird allgemein eine Region verstanden, in der sich überregionale Interaktionssphären ausgebildet haben. Vor allem handelt es sich um verkehrsbegünstigte Räume. Zum Begriff der Interaktionssphäre, die sich neben der räumlichen Dimension auch auf soziale, ökonomische, kulturelle Aspekte erstreckt, vgl. MÜLLER 2001c, 38 ff.

[3] Zur Datierung vgl. MÜLLER 2001b, 68 f. Abb. 18.

[4] MÜLLER 2001a, 69ff. Abb.19a.b; RASSMANN 1996. – Ein jüngst durch ST. SCHWENZER 2002 vorgenommener Versuch, den Hortfund von Melz ins „späte 20. Jahrhundert, vor allem aber in das 19. und das frühe 18. Jahrhundert v.Chr.“ zu datieren, basiert auf subtilen Beobachtungen, die Argumente für die Einordnung ins 19. oder 18. Jahrhundert v.Chr. sind jedoch wenig ausgewogen.

[5] Vgl. die Arbeiten von JACOBS 1991 sowie die Bemerkungen bei SCHIRREN 1997, 29.

Glockenbechereinflüsse – Forschungsstand

Trotz umfangreicher archäologischer Forschungen der zurückliegenden Jahre ist das keramische Fundmaterial des Spätneolithikums in Nordostdeutschland nach wie vor recht dürftig (Vgl. RASSMANN 1993, 34 ff.). Die Keramikfunde stammen überwiegend aus Grabfunden der Einzelgrabkultur und des Spätneolithikums, Siedlungsplätze sind kaum gegraben[6]. Oberflächenfundplätze sind häufiger und lassen erwarten, daß ihre systematische Aufarbeitung den Kenntnis- und Materialbestand bereichern wird (Vgl. RASSMANN 1993, 36). Die Zahl der bekannten Fundplätze mit zahnstockverzierter Keramik ist nicht zuletzt dank der Arbeit von J. Jacobs, der das Material in die späte Einzelgrabkultur datiert und dem Glockenbechereinfluß zuschreibt, angewachsen[7]. Vor einiger Zeit wurde von C.M. Schirren aus Redderstorf (Fpl. 25), Lkr. Nordvorpommern, ein weiterer, relativ umfangreicher Materialkomplex mit zahnstockverzierter Keramik vorgelegt (SCHIRREN 1997, 29 ff.). Leider sind hier wie auch auf anderen Plätzen die weiteren Funde spärlich und auch die Befunde insgesamt wenig aussagekräftig. Das Auftreten zahnstockverzierter Keramik ist ein Indiz für die Übernahme einer innerhalb der Glockenbecherkultur gebräuchlichen Verzierungstechnik im nordostdeutschen Raum. Es wäre jedoch überzogen, Fundplätze mit derartiger Keramik als Zeichen für die Ausbreitung der Glockenbecherkultur in den nordostdeutschen Raum zu werten, wie manche Übersichtskarten glauben machen wollen. Zu berücksichtigen ist, daß trotz der größeren Anzahl dieser Fundplätze mit zahnstockverzierter Keramik klarere Indikatoren für einen Einfluß der Glockenbecherkultur wie Glockenbecher oder Armschutzplatten in Nordostdeutschland nach wie vor sehr selten sind. So äußerten sich bisherige Bearbeiter über die Bewertung der Fundplätze mit zahnstockverzierter Keramik ähnlich vorsichtig. G. Wetzel sprach nach der Auswertung des Siedlungsplatzes von Lanz von „Einzelgrabkultur mit starkem Glockenbechereinschlag" (WETZEL 1969, 167). E. Nagel wertet die Armschutzplatte und die zonen- und zahnstockverzierte Keramik auf dem Fundplatz von Techentin als Einfluß der mitteldeutschen Glockenbecherkultur (NAGEL 1986a, 17). J. Jacobs spricht u.a. allgemein von Fundplätzen mit Glockenbechereinfluß[8]. Nach R. Wiermann „lassen sich lediglich Einflüsse auf die hier ansässige EGK festmachen" (WIERMANN 1995, 120). C.M. Schirren stellt für die Fundplätze Techentin, Muchow und Lanz das Vorhandensein von „starken Komponenten der Glockenbecherkultur" fest (SCHIRREN 1997, 31). Eine ähnliche Bewertung erfährt auch die Zonenverzierung, ein Verzierungselement der westdeutschen Glockenbecher, vorhanden u.a. auf dem Becher von Dumsewitz auf Rügen, den J. Jacobs als „typischen maritimen Becher" betrachtete und ihn dennoch der Einzelgrabkultur zuordnete[9]. Eine systematische Neubewertung der „Funde der Glockenbecherkultur östlich der Elbe auf dem Gebiet der DDR" nahm G. Wetzel vor nahezu drei Jahrzehnten zum Anlaß, diesen Einfluß klassifizierend zu werten. Dabei ordnete er das keramische Material nach seiner Ausprägung von Glockenbechermerkmalen in vier Gruppen (Tabelle 1)[10]. Er stellte bei seinen Untersuchungen fest, daß sich unter den mecklenburgisch-brandenburgischen Keramikfunden kein einziges Importstück befindet (Vgl. WETZEL 1976, 70). Anders bewertete er die Armschutzplatten, die er als „echte Glockenbecherfunde" ansah. Die Keramikfunde zeigten entsprechend der vorhandenen Glockenbecherkomponenten eine unterschiedlich starke Beeinflussung von Seiten der Glockenbecherkultur, als Funde der Glockenbecherkultur seien sie danach schwerlich zu klassifizieren. Die von G. Wetzel verwendeten Ordnungsbegriffe für den mecklenburgisch-brandenburgischen Fundstoff wie Glockenbecheraffinität, Glockenbechermaterial, Funde der Glockenbecherkultur, Glockenbecherkeramik, reflektieren die Schwierigkeit, ein klares Klassifikationssystem für die kulturelle Einordnung der Einzelmerkmale (Verzierungstechnik, Verzierungsmotive, Ornamentanordnung, Form usw.), der Fundobjekte und der Materialkomplexe (z.B. Grab oder Siedlung) zu finden (WETZEL 1976, 55, 70f.). Die

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[6] Der am besten bekannte Siedlungsplatz ist der vor mehr als drei Jahrzehnten untersuchte Siedlungsplatz von Lanz. Vgl. WETZEL 1967.

[7] Vgl. JACOBS 1991 und die Arbeit von WETZEL 1976. In diesem Band eine aktuelle Zusammenstellung von K. MERTENS.

[8] JACOBS 1991, 27. Für die Siedlungsplätze im südwestlichen Mecklenburg stellt er „starken Glockenbechereinfluß" fest (ebd. 18).

[9] JACOBS 1991, 15. Vgl. BEHRENS 1969, 143 mit differenzierter Bewertung der sog. Zonenkeramik.

[10] Vgl. WETZEL 1976, 65f. der sich dabei an STRUVE 1955, 126 ff. orientierte.

Tabelle 1.

Gruppe	GBK--Merkmale	Allgm. Beschreibung	Form	Ornament	Verzierungs-technik	Beispiele
1	4–	Zonenbecher mit allen Merkmalen eines Glockenbechers	Becher breiter als Einzelgrabbecher	Zonenbänder, Metopenverzierung	Zahnstock (Kammstempel, Kammstich), Ritzlinien, Kerbstichverzierung	Angermünde, Bobzin, Klein Görnow, Lanz, Herzsprung, Penzin Pinnow, Strodehne
2	3–	Becherfragmente	Nicht zu ermitteln	Wie Gruppe 1	Wie Gruppe 1, zusätzlich Kreisstempel	Frauenmark, Klein Schwiesow, Muchow 11, Strodehne 8
3	2–	Becherfragmente	Nicht zu ermitteln	Wie Gruppe 1, jedoch nur noch fragmentarisch erhalten	Wie Gruppe 1	Käselow, Muchow 4, Raden, Strodehner Holz
4	1	Becherscherben	Nicht zu ermitteln	Nicht zu ermitteln	Wie Gruppe 1	Havelberg, Neubrandenburg, Prietzen, Rhinow, Schweinitz, Steckelsdorf, Strodehne 10

Auswertung des Fundstoffs und die Zuweisung der Merkmale oder Merkmalskomplexe (Fundobjekte und Materialkomplexe) zu den archäologischen Einheiten wie Glockenbecherkultur, Einzelgrabkultur und Spätneolithikum verdeutlicht gerade in Anbetracht des bescheidenen Umfangs des Materials – wenige Keramikfunde, mangelnde Kenntnis des Siedlungswesens, geringe Anzahl der Grabfunde usw. –, daß der Terminus der archäologischen Kultur hier letztendlich nur als grober Ordnungsbegriff zum Einsatz kommen kann[11].

Verbreitung der Funde mit Merkmalen der Glockenbecherkultur und die Herkunft der Einflüsse

A. Keramik und Armschutzplatten

Die Verbreitung der von G. Wetzel klassifizierten Keramikfunde – nicht berücksichtigt wurden die Keramikfunde der Gruppe 4[12] – zeigt vier Schwerpunkte: das Havelmündungsgebiet, die Prignitz mit dem südwestlichen Mecklenburg, die Uckermark und die Region um die mittlere Warnow (Abb. 1). Die Karte schließt die der Glockenbecherkultur zugeschriebenen Armschutzplatten ein. E. Nagel kam aufgrund der mineralogischen Zusammensetzung von vier Exemplaren aus Mecklenburg-Vorpommern (Liepen, Pasewalk, Techentin, Valluhn) zu dem Schluß, daß diese Armschutzplatten aus einheimischem Material hergestellt wurden (Abb. 2; Nagel 1986a, 16). Die Feststellung G. Wetzels, es handelt sich bei den Armschutzplatten um echte Glockenbecherfunde, kann demnach zumindest nicht für alle Stücke zutreffen (Wetzel 1976, 67). Vergleicht man den Fundniederschlag der „Glockenbecherkultur“ mit dem der spätneolithischen Feuersteindolche, tritt ihr bescheidener Umfang deutlich hervor (Abb. 1). Ähnliches ergäbe ein Vergleich mit den zahlreichen Funden der Einzelgrabkultur (Jacobs 1991, 161 ff. Karte 2–4). Einflüsse der Glockenbecherkultur erreichten offenbar allein das westliche Arbeitsgebiet, die Prignitz

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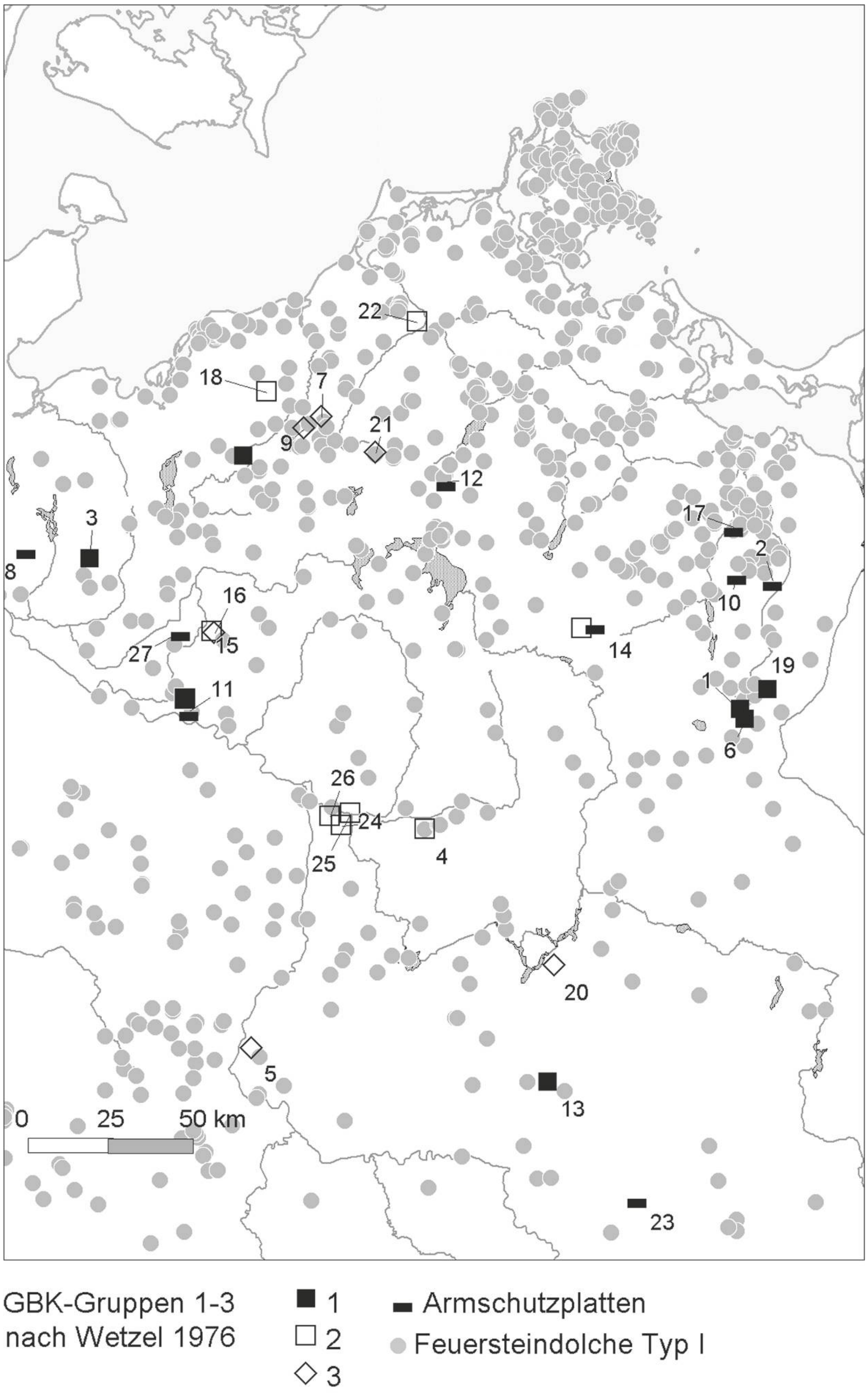
[11] Die Klassifikation muß neben der räumlichen Dimension auch die zeitliche berücksichtigen. Hier impliziert die Anwendung des Konzeptes der „archäologischen Kultur“ häufig eine statische Bewertung, die den Prozeß der Veränderung vernachlässigt. Für die Glockenbecherkultur ist ein Zeitrum von 400-500 Jahren anzunehmen: Vgl. Müller 2001a, 68 f. Abb. 18.

[12] Hier vgl. Beitrag K. Mertens mit einem Nachweis auch einfacher zahnstockverzierter Keramikfunde. Dabei gilt zu berücksichtigen, daß die Zahnstockverzierung bereits im Mittelneolithikum auftritt und dieses Merkmal allein kein sicheres Indiz für den Glockenbechereinfluß ist.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nach Wetzel 1976
■ 1
□ 2
◇ 3
▬ Armschutzplatten
● Feuersteindolche Typ I

Abb. 1. Verbreitung von Funden der Glockenbecherkultur zwischen Elbe und Oder (nach Wetzel 1976 mit Nachträgen, vgl. Fundliste 1). Nicht berücksichtigt wurden Funde der Gruppe 4 (zahnstockverzierte Keramikfragmente – vgl. Liste von K. Mertens in diesem Band).

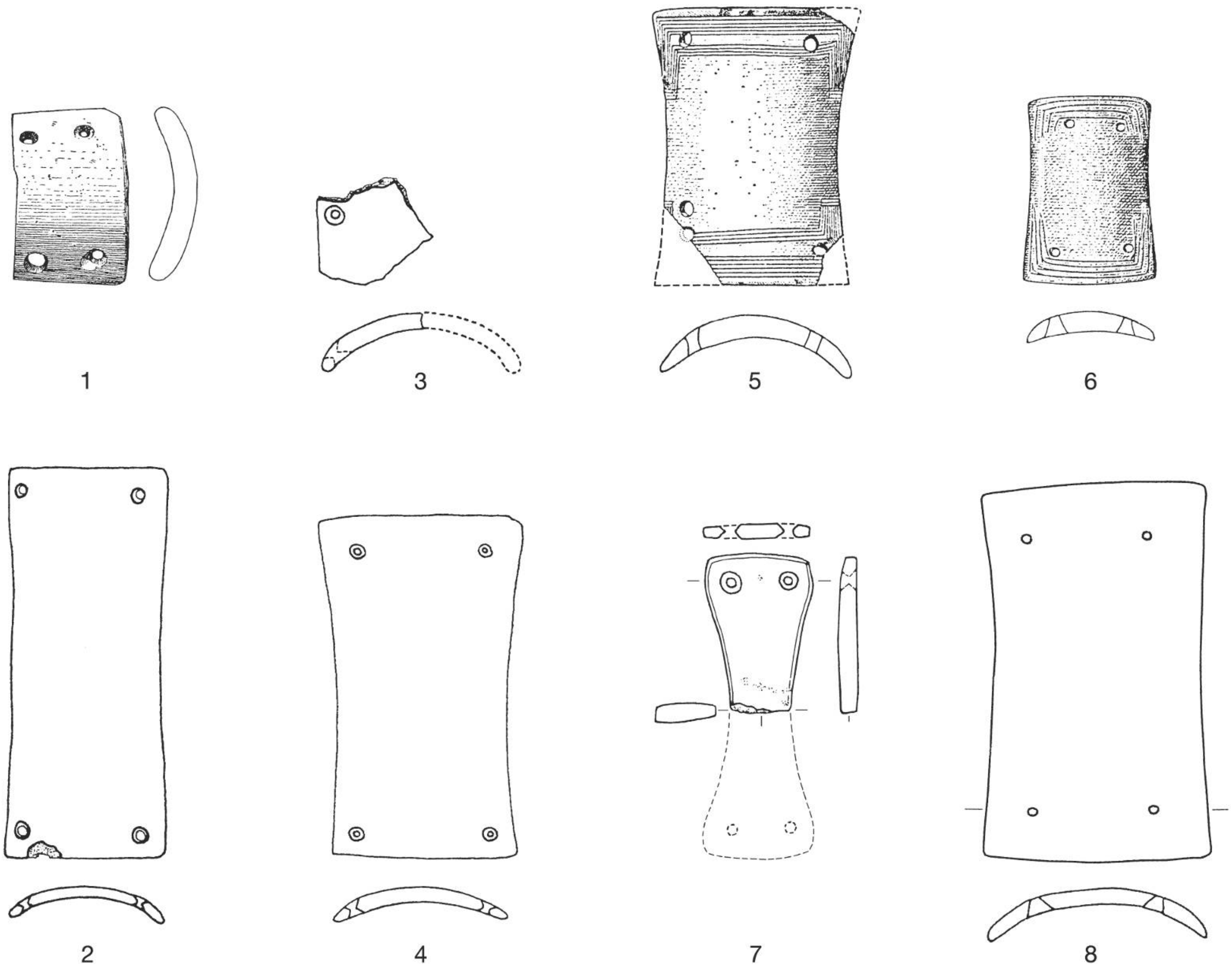

Abb. 2. Armschutzplatten aus Nordostdeutschland. 1 Battin, 2 Kleptow, 3 Lanz, 4 Mechow, 5 Pasewalk, 6 Techentin, 7 Schlieben, 8 Valluhn. M. 1:2 (Nach Wetzel 1976, Jacobs 1991).

sowie die Uckermark in größerem Maße. Dabei stellen die Funde aus der südlichen Uckermark (Angermünde, Herzsprung) die prägnantesten Glockenbecher dar, dagegen sind die Stücke aus dem westlichen Arbeitsgebiet wie Penzin, Bobzin oder Klein Görnow weniger charakteristisch (Abb. 3).

G. Wetzel sprach sich für eine Ableitung der für Brandenburg und Mecklenburg-Vorpommern relevanten Glockenbechereinflüsse vor allem aus dem mitteldeutschen Bereich aus (Wetzel 1976, 68 ff.). Entscheidend waren für ihn die breiten Armschutzplatten, das Vorkommen der Metopenverzierung und zweizonig verzierte Becher. Einflüsse aus dem Westen sind seiner Meinung dagegen seltener. Darauf wiesen Merkmale wie die Winkellinie zwischen Horizontallinie, z.B. Strodehne 8 (Wetzel 1976, 59 Abb. 2,29), sowie der Bauchknick einiger Gefäße wie bei dem Becher von Penzin hin (Abb. 3:2). H. Behrens äußerte sich hinsichtlich der Bewertung der Metopenverzierung ähnlich. Er ordnete u.a. den Glockenbecher von Pinnow (Abb. 3:4) in die Nähe der mitteldeutschen Glockenbecher ein (Behrens 1969, 143). Insgesamt stellte Behrens klar heraus, daß es im Nordosten Deutschlands nur einige „sporadische Belege“ für Einflüsse der Glockenbecherkultur gibt (Behrens 1969, 143). Im Unterschied zu Wetzel maß er dem westlichen Einfluß eine größere Bedeutung zu (Behrens 1969, 143. Ähnlich Struve 1955, 55).

In den zeitlichen Horizont der Glockenbecherkultur sind auch die Keramikfunde mit der sogenannten Stacheldrahtverzierung einzuordnen (Struve 1955, 51 ff.; Lomborg 1973, 137; Strahl 1986, 157 ff.). J.N. Lanting erwog nach Radiokarbondaten den Zeitraum zwischen 2150 und 1800 v.Chr. (Lanting 1973, 314; Rassmann 1993, 36). Für eine Datierung ins Spätneolithikum spricht das Material einer Siedlungsgrube bei Güstrow, zu der ein lanzettförmiger Flintdolch, ein Axtrohling, ein Becherfragment und eine Scherbe mit Stacheldrahtverzierung zählen (Rassmann 1993, 36; 134 Nr. 278 Taf. 7 l–p).

Diese Funde stammen aus dem westlichen Mecklenburg. C.M. Schirren stellte auf einem bei Jarmen

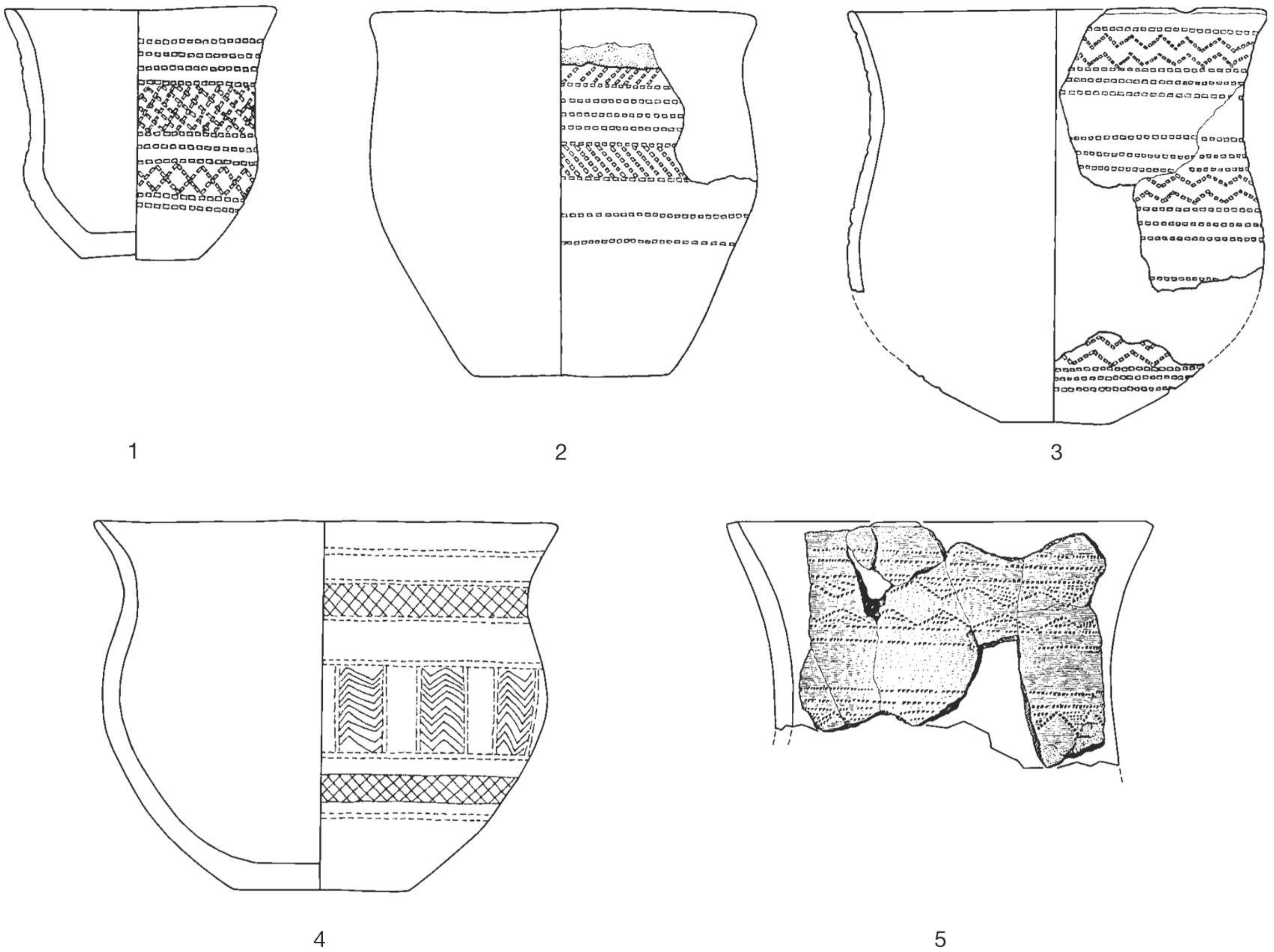

Abb. 3. Glockenbecher bzw. Becher mit ausgeprägten stilistischen Merkmalen der Glockenbecherkultur. 1 Bobzin, 2 Penzin, 3 Angermünde, 4 Pinnow, 5 Klein Görnow. M. 1:2 (nach Wetzel 1976, Schuldt 1969).

in Nordvorpommern gefundenen Becher eine der Stacheldrahtverzierung ähnliche Verzierung fest (Shirren 1997, 34 Abb. 4). Es wäre hiermit der östlichste Fund im Arbeitsgebiet. Eine sichere Ansprache als Stacheldrahtverzierung ist nicht möglich, es bestehen in Form und nach der plastischen Verzierung durch Knubben durchaus Ähnlichkeiten zu dem in einem Grab gefundenen Becher von Ziesendorf bei Rostock (Nilius 1967, 184 ff. Abb. 2).

Die Keramikfunde liefern trotz ihres geringen Umfangs Hinweise auf die Beeinflussung aus dem nordwestdeutschen Raum (z.B. Stacheldrahtverzierung und zonal angeordnete Ornamente), Mitteldeutschland (u.a. Metopenmuster) und dem böhmisch-mährischen Bereich wie der Glockenbecher von Herzsprung (Abb. 4). Zukünftig sollte neben den formenkundlichen Merkmalen (Verzierungselemente, Ornament) und deren statistischer Auswertung gleichfalls eine technologische Bewertung der Keramik erfolgen, wie sie von L. Salanova mit großem Erfolg für das westeuropäische Fundmaterial vorgenommen wurde (Salanova 2000, bes. 4ff.). Erfolgversprechend wäre auch eine Berücksichtigung der Begleitkeramik der Glockenbecherkultur für die Diskussion des Glockenbechereinflusses. Hier bieten die von M. Besse vorgelegten Arbeiten eine verläßliche Orientierung (Besse 1996).

B. Spandolchderivate

Ein weiteres Indiz für Einflüsse der Glockenbecherkultur sind die sogenannten Spandolchderivate, die in die späte Einzelgrabkultur datieren. Sie entsprechen damit der frühen Glockenbecherkultur, zeitlich werden sie sich nur gering mit den lanzettförmigen Dolchen überschneiden. Die Spandolchderivate sind ein wichtiges Argument von H. Behrens für die Bedeutung der westlichen Glockenbecherkultur (Behrens 1969, 144f.). Ihre Technik verbindet sie mit den westeuropäischen Klingendolchen; aus diesem Raum ist wahrscheinlich auch die Herstellungstechnik übernommen worden. Derartige Funde sind im westlichen Arbeitsgebiet häufiger, seltener dagegen im östlichen Mecklenburg und in der Uckermark (Abb. 5). Her-

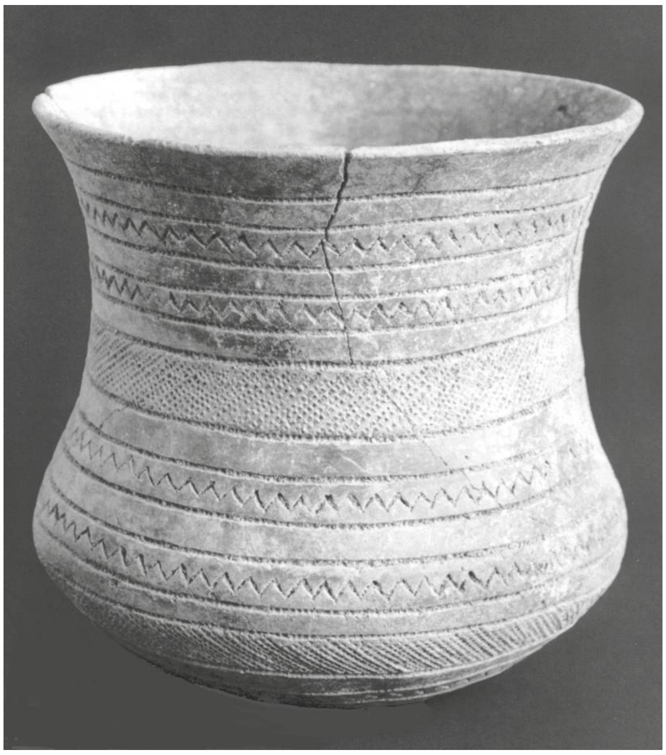

Abb. 4. Herzsprung. M. ca. 1:2 (nach Leube 1993).

vorzuheben ist der Umstand, daß von der an Feuersteinartefakten überaus reichen Insel Rügen nur vier Exemplare bekannt sind. Das Fundbild ist als Beispiel einer West–Ost-orientierten Beeinflussung zu werten und stützt die von Behrens vor mehr als drei Jahrzehnten formulierte Überlegung, den westlichen Einfluß der Glockenbecherkultur stärker zu gewichten (Wetzel 1976, 70; Agthe 1989, 61 ff.; Rassmann 1993, 17 f.).

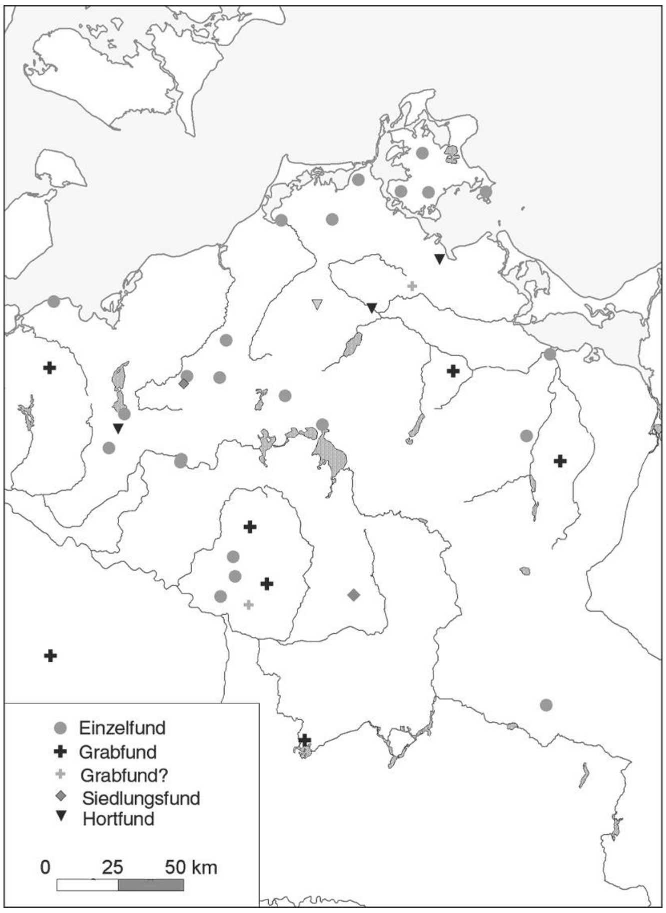

Abb. 5. Verbreitung der Spandolchderivate (nach Rassmann 1993, 280 Karte 2).

C. Grab und Bestattungssitten

Die bisherige Diskussion der Einflüsse der Glockenbecherkultur stützte sich vor allem auf den keramischen Fundstoff, die Armschutzplatten und die Spandolchderivate. Vernachlässigt wurde eine Auswertung der regelhaften Grabsitten der Glockenbecherkultur[13]. Verständlich wird das geringe Interesse, wenn man die Dürftigkeit der Belege aus Nordostdeutschland berücksichtigt. Die wenigen Grabfunde kamen vor allem im 19. oder frühen 20. Jahrhundert zutage[14]. Ein weiteres Problem stellt die geschlechtsspezifische Lage und Orientierung der Bestatteten der Glockenbecherkultur dar, die ohne anthropologische Untersuchung nicht zu beurteilen ist. Der wohl am besten beobachtete Grabfund von Herzsprung ist bislang nicht publiziert[15]. Die wenigen Beobachtungen zeigen für spätneolithische Bestattungen vorwiegend eine Nord–Süd-Orientierung; vor allem in der Uckermark wurde eine größere Zahl an Nord–Süd-ausgerichteten Gräbern beobachtetet (Rassmann 1993, 253 Tab. 253). Diese Ausrichtung ist allerdings nicht allein für die Gräber mit Feuersteindolchen charakteristisch, sondern auch für Bestattungen der Oderschnurkeramik (Vgl. Schmidt 1995, 145 ff.). J. Jacobs stellte fest, daß sich die in der frühen Einzelgrabkultur (Fundgruppe I) ähnlich der Schnurkeramik übliche Ost–West-Orientierung über eine Westsüdwest–Ostnordost-Orientierung der mittleren Einzelgrabkultur (Fundgruppe II) zu einer Nord–Süd-Orientierung in der späten Einzelgrabkultur (Fundgruppe II) wandelte (Jacobs 1991, 17). Im Grabfund von Ziesendorf sind zwei Bestattete Nord–Süd bzw. Süd–Nord mit den Füßen zueinander beigesetzt (Nilius 1967, 174 ff.). Leider liegen für die Altgrabung keine Geschlechtsbestimmun-gen vor. Es wäre aber

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[13] Bruchhaus / Neubert 2001, 133 ff.: grundsätzlich Hocklage – Männer auf linker Seite liegend, Nord–Süd-orientiert – Frauen auf rechter Seite liegend, Süd–Nord-orientiert.

[14] J. Jacobs klammerte die Grab- und Bestattungssitten der Einzelgrabkultur bei seinen Untersuchungen aus. Im Katalog finden sich nur teilweise Hinweise. Vgl. Jacobs 1991.

[15] Vgl. den nur kurzen Verweis und Foto bei Leube 1993–94.

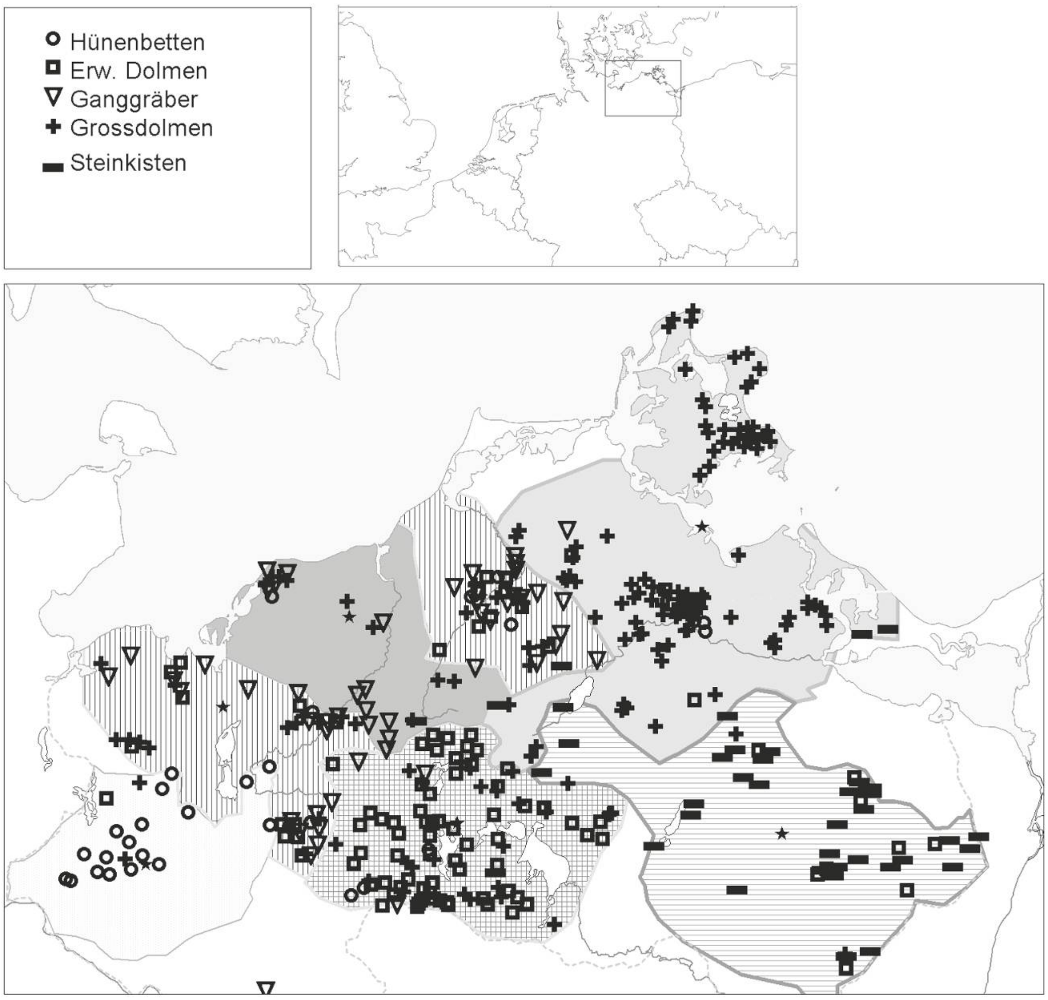

Abb. 6A. Regionale Gliederung der neolithischen Siedlungslandschaft nach Beschaffenheit der Grabarchitektur (Megalithanlagen und Steinkisten). Daten nach Schuldt 1972.

durchaus eine für die Glockenbecherkultur übliche geschlechtsspezifische Orientierung möglich[16]. Die wenigen Bemerkungen zeigen, daß bei der Beurteilung des Glockenbechereinflusses den spärlichen Grabfunden größere Aufmerksamkeit zuteil werden sollte. Dann könnte doch der Wandel von der West–Ost- zur Nord–Süd-Orientierung durchaus auf den Einfluß der Glockenbecherkultur zurückzuführen sein.

Regionale Gliederung Mecklenburg-Vorpommerns im Spätneolithikum und ein Exkurs zur Verbreitung der Megalithanlagen

Die nähere Betrachtung der durch die Glockenbecherkultur beeinflußten Regionen legt die Frage nach der regionalen Gliederung Nordostdeutschlands im ausgehenden Neolithikum und der frühen Bronzezeit nahe. G. Wetzel stellte fest, daß die Glockenbecherfunde in Mecklenburg an die bekannten neolithischen Fundräume gebunden sind; gleiches trifft auf die Funde in der Uckermark zu. Für die Verhältnisse im Neolithikum konnte E. Schuldt nach der Auswertung der Megalithgräber wesentliches beisteuern. Ein Vergleich der Fundverbreitung spätneolithischer Funde mit dem durch die Megalithanlagen und Steinkisten markierten Landschaftsraum muß natürlich berücksichtigen, daß zwischen beiden Erscheinungen eine zeitliche Differenz von etwa 500–1000 Jahren liegt. Die Überlegungen E. Schuldts verdienen besondere Aufmerksamkeit; da die durch ihn aufgezeigten sechs regionalen „neolithischen Siedlungsgruppen“ teilweise klare geographische Muster erkennen lassen, die einen Vergleich mit dem Befund in jüngerer Zeit nahe legen. Die von E. Schuldt entwickelten Vorstellungen dienen als Grundlage für die in Abb. 6A/B dargestellte Gliederung (Schuldt 1972, 97 ff. 256 Karte 9):

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[16] Zu Parallelen aus Südskandinavien Lomborg 1973, 106 ff. Sein Verweis Parallelen in der Schnurkeramik sind zu relativieren. In Vikletice sind die Bestatteten der Schnurkeramik nicht Nord-Süd sondern in typischer Weise Ost-West orientiert (Buchvaldek 1967, 66 Abb. 8, 3).

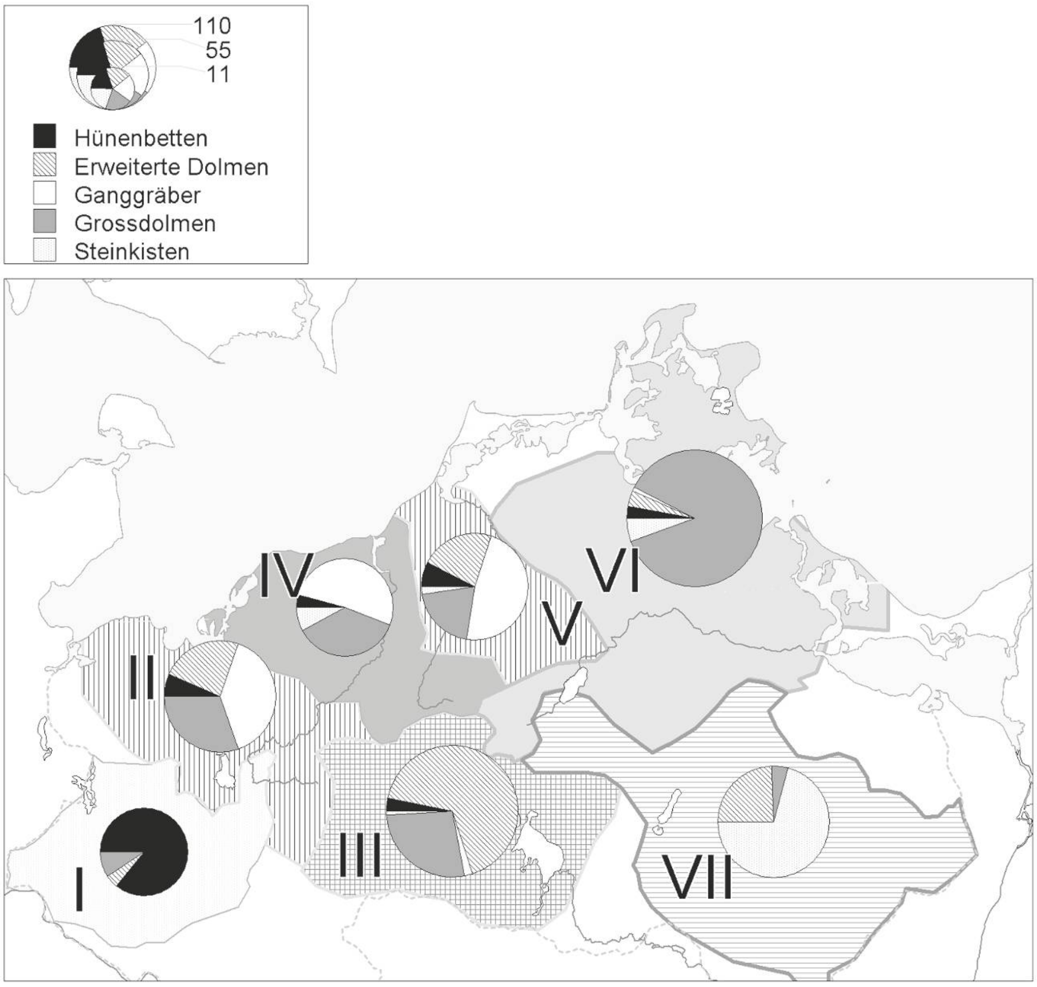

Abb. 6 B. Häufigkeit der Grabtypen in den Regionen I – VII.

Westgruppe (Hünenbetten ohne Kammer)	*Abb. 6 A/B*	Region I
Nordwestgruppe (Ganggräber)		Region II, IV, u. V
Seengruppe (erweiterte Dolmen)		Region III
Nordgruppe (Großdolmen mit Windfang)		Region VI – Rügen
Nordostgruppe (Großdolmen mit Vorraum)		Region VI Festland Vorpommerns
Südostgruppe (Steinkisten)		Region VII

Die von Schuldt vorgenommene Gliederung wurde teilweise abgeändert. Wenngleich Ganggräber in der Nordwestgruppe dominieren, sind die Anteile von Ganggräbern, Großdolmen und erweiterten Dolmen in Region II, IV und V unterschiedlich, wodurch eine Dreiteilung angemessener erscheint. Auf die Untergliederung Vorpommerns in Nord- bzw. Nordostgruppe wurde verzichtet. Keine Region wird so deutlich von einem Grabtyp dominiert wie Vorpommern durch die Großdolmen. Die Unterschiede zwischen den Anlagen auf dem Festland (Vorraum) und auf Rügen (Windfang) scheinen eindeutig, dieses Architekturmerkmal ist aber im interregionalen Vergleich geringer zu bewerten als der Unterschied zwischen den Grabtypen insgesamt und findet in dieser Darstellung deshalb keine Berücksichtigung. Der im Arbeitsgebiet am weitesten verbreitete Grabtyp ist der Großdolmen. Neben den bereits aufgezeigten Unterschieden bei den vorpommerschen Anlagen stellte Schuldt die Großdolmen vom mecklenburgischen Typ heraus, die vom Westen bis zur unteren Recknitz verbreitet sind. Das entspricht etwa der Grenze zwischen Region V und VI.

Die Ergebnisse der vorwiegend in den 60er Jahren durchgeführten Ausgrabungen ergaben, daß die in der Abb. 6 A/B berücksichtigten Megalithanlagen nicht einem engen Zeithorizont zuzuschreiben sind. Die Hünenbetten sind an den Übergang vom Früh- zum Mittelneolithikum einzuordnen. Für die erweiterten Dolmen ist das ältere Mittelneolithikum in Betracht zu ziehen. Ihre Weiterentwicklung hin zu den Großdolmen erfolgte nach Schuldt noch im älteren Mittelneolithikum. Die Impulse für die Errichtung der Ganggräber stammen nach E. Schuldt aus dem Bereich der dänischen Inseln. Er schloß aber die Möglichkeit einer Vermittlung über Schleswig-Holstein nicht aus[17].

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[17] Schuldt 1972, 93 ff.; Ein Übersichtskarte über die Gesamtverbreitung von Midgley 1992, 433 Abb. 121.

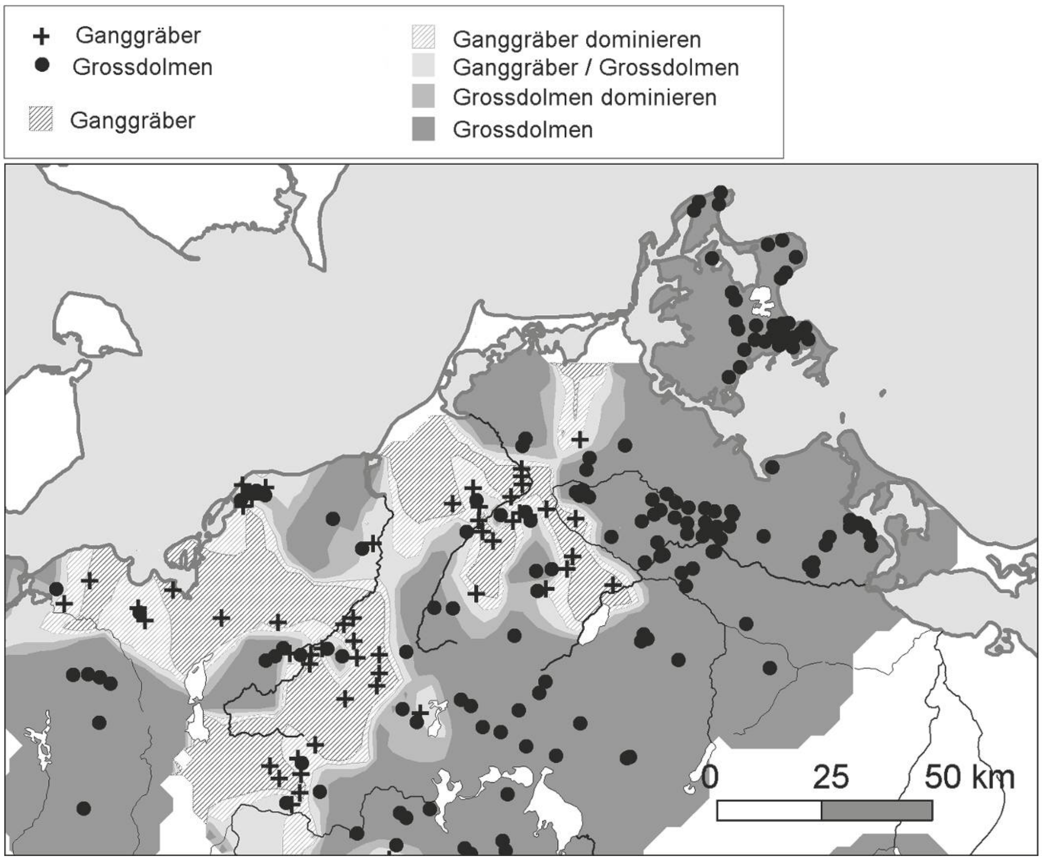

Abb. 6 C. Vorkommen der Großdolmen und Ganggräber. Isometrische Darstellung der Häufigkeiten nach Inverse Distance Weighting (Zellgröße 3 km, Trendmodellierung in einem Suchradius von 20 km).

Wenngleich die Datierung der Grabtypen unter dem Mangel an genauen stratigraphischen Beobachtungen leidet, wird die Entwicklung zumindest in groben Zügen deutlich.

Eine detailliertere regionale Gliederung als in Abb. 6A/B erlaubt der Vergleich der Verbreitung der wohl zum großen Teil in den gleichen Zeitraum datierenden Großdolmen und Ganggräber (Abb. 6C). Auffällig ist das in der isometrischen Darstellung sichtbare geschlossene Verbreitungsgebiet der Großdolmen und die Bindung der Ganggräber an den küstennahen Raum bzw. das verkehrsgeographisch günstige Gebiet zwischen Elde und Warnow, eine Zone, aus der in unterschiedlichen Zeiten gehäuft Funde südskandinavischer Prägung stammen[18]. In südlicher Richtung setzt sich das Vorkommen der Ganggräber bis in die Altmark fort (nicht im Kartenausschnitt berücksichtigt)[19]. Im Unterschied zu den durch Kontakte aus Südskandinavien beeinflußten Gebieten mit Ganggräbern, könnte man für die Region der geschlossenen Verbreitung der Großdolmen ein eher autarkes Kulturgebiet vermuten.

Vergleicht man die durch Ganggräber und Großdolmen vorgegebenen Regionen mit dem Auftreten der durch die Glockenbecherkultur beeinflußten Funde, zeigen sich Unterschiede. Die beiden fundreichsten Regionen mit Glockenbechereinflüssen im Südwesten und Osten des Arbeitsgebietes befinden sich weitgehend außerhalb des Verbreitungsgebietes beider Großsteingrabtypen[20]. Weiter nördlich im engeren Verbreitungsgebiet der Megalithgräber finden sich Glockenbechereinflüsse vor allem in dem Gebiet der Ganggräber. Im nordöstlichen Mecklenburg und in Vorpommern sind sie dagegen sehr selten.

Beide an Glockenbechereinflüssen reichere Regionen sind zudem in mittelneolithischer Zeit durch Verbindungen nach Süden stärker geprägt. Für die Prignitz bemerkte I. Nilius den gegenüber der Trichterbecherkultur deutlicheren Einfluß der Alttiefstichkeramik, der, wie die Funde von Lindenbeck zeigen, bis ins südwestliche Mecklenburg reicht (Nilius 1971,

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[18] Struve 1955, Taf. 28; 30; Rassmann 1993, 297 Karte 19; 316 Karte 38. – Für die Frühe Bronzezeit vgl. Rassmann 2001, 21 Abb. 13.

[19] Preuß 1980, 76. Eine Übersicht über den aktuellen Stand der Forschung bieten Fritsch / Müller 2002, 63 ff.

[20] Auf diesen Zusammenhang wies bereits Nilius 1971, 78 f. hin.

78 f.; Nagel 1986b, 87 ff.). Für die Uckermark ist die Situation ähnlich zu beurteilen[21]. Die Bindung des Glockenbechereinflusses an einen Raum, der schon in früherer Zeit weniger mit dem mecklenburgischen Raum als mit den südlichen Regionen verbunden ist, läßt sich auch in der Bronzezeit beobachten (Rassmann 2001, 19 Abb. 12; 16 Abb. 10). So sind gerade die Feuersteinsicheln im Südwesten Mecklenburgs, in der Prignitz und der Uckermark selten. Für die Uckermark zeigen Grab- und Hortfunde der frühen Bronzezeit Einflüsse der Aunjetitzer Kultur, die sich in Mecklenburg und Vorpommern nicht im gleichen Umfang niederschlagen (Rassmann im Druck, 255f.).

Ein auffälliges Verbreitungsbild zeigen die mittelneolithischen Steinkisten mit ihrem deutlichen Schwerpunkt in der Uckermark und einer kleineren westlich gelegenen Gruppe im östlichen Mecklenburg (Abb. 6A)[22]. Weiter westlich treten nur noch vereinzelt Fundpunkte bis zum Gebiet um den Kummerower See auf. Im Spätneolithikum zeigt die Verbreitung der späten einzelgrabzeitlichen K-Äxte ein ähnliches Bild. Bei einem Vergleich der Verbreitung der spätneolithischen Feuersteindolche und der K-Äxte, von deren chronologischer Überschneidung man ausgehen kann, wird das Bild deutlicher (Abb. 7). Trotz der weiträumigen Überschneidung beider Verbreitungsgebiete verdeutlicht die quantitative Kartierung Fundräume, in denen, einerseits Äxte bzw. andererseits Dolche dominieren. Dieses Verfahren eignet sich vor allem für die Herausarbeitung von Grenzen[23]. Die Feuersteindolche sind aus der nördlichen Uckermark in größerer Zahl bekannt. Im zentralen und südlichen Gebiet sind sie seltener als die K-Äxte. Letztere streuen in nördlicher und nordwestlicher Richtung, wobei u.a. ein Schwerpunkt im Werder nordöstlich Neubrandenburgs liegt. Gerade aus diesem Kleinraum sind die westlichsten Grabfunde mit Oderschnurkeramik bekannt[24]. Der Umstand, daß auf dem Werder auch ein frühbronzezeitlicher Siedlungsplatzes mit umfangreicher Aunjetitzer Keramik und Belegen für Metallverarbeitung bekannt ist, spricht für die Anbindung dieser Region in der frühen Bronzezeit an den durch Aunjetitzer Einfluß stärker geprägten uckermärkischen Raum (Szczesiak 1999).

Die Notwendigkeit, der kulturübergreifenden vergleichenden Analyse des Fundmaterials machte vor geraumer Zeit bereits H.J. Kühn deutlich, der in Schleswig-Holstein ebenfalls unterschiedliche Verbreitungsschwerpunkte von K-Äxten und Feuersteindolchen vom Typ I feststellen konnte und auf das Weiterwirken einzelgrabzeitlicher Tradition verweis[25].

Die Beobachtung, daß die Fundplätze mit zahnstockverzierter Keramik in den durch das Auftreten von Großdolmen charakterisierten Landschaften seltener, häufiger dagegen im Verbreitungsgebiet der Ganggräber (vgl. Abb. 6C) sind,[26] hat eingedenk der chronologischen Differenz zwischen der Errichtung der Ganggräber und der Glockenbecherkultur – sie beträgt etwa 500–1000 Jahre – Bedeutung für die Interpretation der regionalen Gliederung. Die Ganggräber – mit ihrem Verbreitungsgebiet von Südskandinavien über Mecklenburg bis in die Altmark – können als Indikatoren einen weiträumigen Interaktionsraum aufzeigen. Verwiesen werden sollte in diesem Zusammenhang auch auf die große Anzahl der Feuersteindolche in der Altmark – unter ihnen offenbar auch Importe aus dem südskandinavischen Bereich –, die mit den westmecklenburgischen Exemplaren ein nahezu geschlossenes Verbreitungsgebiet bilden (Rassmann 2001, 24 ff Abb. 14 u. 15).

In Nordjütland befinden sich im Verbreitungsgebiet der Glockenbecherfunde zugleich Feuersteinbergwerke und die ihnen vorgelagerten Werkstätten. Eine Kontrolle dieser Ressourcen durch regionale Gruppen der Glockenbecherkultur wird vermutet (Vandkilde 1991, 13 ff.). Der Zusammenhang zwischen diesen regionalen Glockenbechergruppen und der Flintdolchherstellung, das Auftreten skandinavischer Importe in Nordostdeutschland, vor allem in Gebieten mit Ganggräbern, und die Bindung der Fundplätze mit zahnstockverzierter Keramik an die gleichen Regionen könnte auf das Bestehen eines Interaktionsraumes mit erheblicher geographischer und diachroner Spannweite hindeuten. Der Umstand, daß

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[21] Vgl. Kirsch 1993, Karte 8ff.; Wetzel 1996, 63 betont die Beziehungen zur Trichterbecherkultur.

[22] Auf die chronologische Diskussion an dieser Stelle einzugehen, ist nicht möglich. S. statt dessen Schuldt 1972; 105; ders. 1975; Schoknecht 1977; Nilius 1978; Wolff 1991, 17ff.; Kirsch 1994, 61ff.

[23] Über die Karte wurde ein Raster mit einer Zellgröße von 2 x 2 km gelegt. Dolche wurden mit 1, Äxte mit 0 quantifiziert. In den Rastern wurden dann die Häufigkeiten ausgezählt und Mittelwerte gebildet. Ein Wert von <0,5 steht für das Vorherrschen von Äxten; >0,5 der Dolche und für 0,5 ein Gleichgewicht zwischen Äxten und Dolchen usw. Die Berechnung des Trends erfolgte mit einem Radius von 10 km um jedes Objekt.

[24] Schmidt 1995 ordnet diese Funde der Einzelgrabkultur zu.

[25] Kühn 1979, 87 f. Karte 20. Er verwies zugleich auf eine ähnliche Konstellation im jütländischen Bereich: spätneolithische Lanzettdolche (Lomborg 1973, 36 f. Abb. 12-15); K-Äxte (Glob 1944, 47 Abb. 22).

[26] Vgl. den Beitrag K. Mertens in diesem Band.

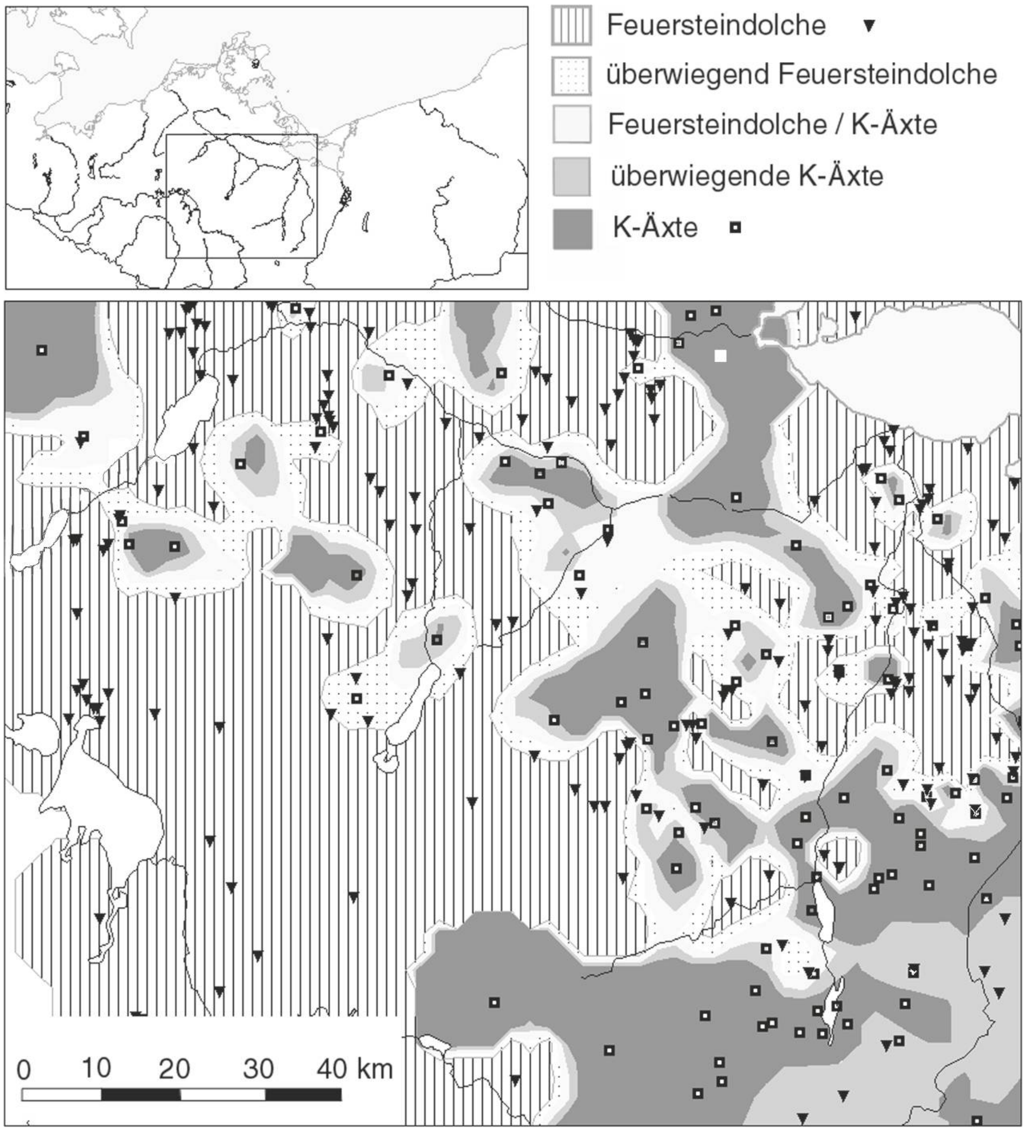

Abb. 7. Vorkommen von Feuersteindolchen und K-Äxten. Isometrische Darstellung der Häufigkeiten nach Inverse Distance Weighting (Zellgröße 2 km, Trendberechnung in einem Suchradius von 10 km).

dagegen im Verbreitungsgebiet der Großdolmen zahnstockverzierte Keramik und aus Skandinavien stammende Feuersteindolche selten sind, zeigt Grenzen der Interaktionsräume auf, ein Anzeichen für die Kontrolle der bestehenden Austauschsysteme bzw. Netzwerke.

Ein kleinräumiger Vergleich von Ganggräbern und Siedlungsplätzen mit zahnstockverzierter Keramik läßt vermuten, daß die Produzenten letzterer andere Räume bevorzugten. Eine sichere Beurteilung dieser Konstellation ist jedoch nicht möglich, sie setzte einen höheren Kenntnisstand über das Vorkommen neolithischer Siedlungsplätze voraus[27].

Zusammenfassung

Es zeigt sich, daß sich die innere regionale Gliederung Nordostdeutschlands im Spätneolithikum auch in der Verteilung der Funde der Glockenbecherkultur spiegelt. Einflüsse aus Mittel- und Westdeutschland bestimmen vor allem die Funde im Südwesten Mecklenburgs und Nordwesten Brandenburgs. Das Fundmaterial der Uckermark spiegelt Einflüsse aus Mitteldeutschland und dem südöstlichen Mitteleuropa.

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[27] E. Nagel konnte vor zwei Jahrzehnten für den ehemaligen Bezirk Schwerin 2393 neolithische Fundplätze aufführen. Vor allem handelt es sich um Einzelfunde (1192) und Oberflächenfundplätze (885). Bescheidener ist die Zahl der Fundplätze mit einzeln gelegenen Megalithgräber bzw. Nekropolen (256) und Flachgräbern (22). Die schwierige Datierung zahlreicher Fundplätze liegt auf der Hand, zumal von 690 Fundplätzen ausschließlich Steingeräten vorliegen. Nur auf 27 Fundplätze wurde eine nennenswerte Kulturschicht beobachtet (Nagel 1986b, 95ff.). Die von E. Nagel vorgelegten Zahlen verdeutlichen, daß kleinräumige, siedlungskundliche Untersuchungen auf Grundlage eines Vergleichs allein mit der Verteilung der Großsteingräber (etwa 10% der Fundplätze) wenig aussagekräftig sind.

Dem westlichen Einfluß wie Stacheldrahtverzierung und Spandolche kommt für die Uckermark keine Bedeutung zu, er erreicht vor allem das westliche Arbeitsgebiet. Aber auch der Weg über die Ostsee ist in Betracht zu ziehen, durch den das Küstengebiet weiträumig erreicht wurde, wie z.B. der Zonenbecher aus dem Grabfund von Dumsevitz auf Rügen erkennen läßt

Der kursorische Vergleich vom Mittelneolithikum bis in die frühe Bronzezeit zeigt, daß die von der Glockenbecherkultur beeinflußten Funde in traditionelle Interaktionsräume eingebunden waren, die trotz der sich im 3. Jahrtausend vollziehenden Veränderungen, ohne gravierende Veränderungen Bestand hatten[28].

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[28] Hier ist vor allem an die Auswirkung der Ausweitung der Kupfer- und Bronzemetallurgie zu denken.

Fundliste

1. **Angermünde**, Kr. Angermünde *(Abb. 2,3)*
   Wetzel 1976, 55 ff. Nr. 20, Abb. 1,1
   Mus. Angermünde
   Einzelfund
   Fragmente eines Zonenbechers
2. **Battin**, Kr. Uckermark *(Abb. 4,1)*
   Raddatz 1952, 379 ff. Abb. 1; Wetzel 1976, 55f. Nr. 18; Nagel 1986a, 13 Nr. 1
   Grab?
   Ehem. Schulsammlung Torgelow (Verlust)
   Armschutzplatte aus rötlichem Gestein
3. **Bobzin**, Kr. Ludwigslust *(Abb. 2,1)*
   Schroeder 1951, 29f., 71, 133 f. Taf.9, 10; Wetzel 1976, 56, Nr. 8, Abb. 1,7
   Archäologisches Landesmuseum Mecklenburg-Vorpommern E 326
   Flachgrab ohne Steinschutz
   geschweifter Becher mit Zahnstockverzierung
4. **Friesack**, Kr. Havelland
   Schroeder 1951, 31f., 39 Taf. 14,6; Wetzel 1976, 56 Nr. 29
   Sammlung Schneider (Verbleib unbekannt)
   Siedlung?
   Randscherbe eines zahnstockverzierten Bechers
5. **Gerwisch**, Kr. Jerichower Land
   Wetzel 1976, 56 f. Abb. 1.12–22 Nr. 33
   Magdeburg 64:23 d; III/70/979
   Siedlung
   Scherben mit Zahnstock-, Ritzlinien und Stempelverzierung, daneben Keramik der Schönfelder, Einzelgrab- und Kugelamphorenkultur
6. **Herzsprung**, Kr. Uckermark *(Abb. 3)*
   Leube 1993–94, 86 f. Abb. 1
   Brandenburgisches Landesmuseum
   Grab
   2 Glockenbecher? (1 Exemplar abgebildet)
7. **Käselow**, Gem. Mistorf, Kr. Güstrow
   Wetzel 1976, 56 Nr. 4a
   Mus. Güstrow
   Siedlung
   Becherscherbe mit Zonenverzierung, 4 weitere verzierte Scherben, Flintartefakte u. a. 1 Sichelfragment, 2 Pfeilspitzen mit konkaver Basis
8. **Klein Görnow**, Gem. Groß Görnow, Kr. Parchim (Abb. 2,5)
   Schuldt 1969, 53–65, Abb. 48,7; Wetzel 1976, 58 Nr. 3
   Archäologisches Landesmuseum Mecklenburg-Vorpommern 66/7, 8, 14
   Ganggrab
   Scherben eines Bechers mit Zonenverzierung aus je zwei bis drei horizontalen Zahnstocklinien
9. **Klein Schwiesow** Ortsteil von Groß Schwiesow, Kr. Güstrow
   Wetzel 1976, 58 f. 65, Nr. 4, Abb. 2,5
   Mus. Güstrow I 1972/171
   Siedlung?
   Scherben mit Zahnstockverzierung, Flintartefakte u.a. Dolchgriff, Pfeilspitzen, Schaber, Klingen
10. **Kleptow**, Gem. Ludwigsburg, Kr. Uckermark *(Abb. 4,2)*
    Schroeder 1951, 30, 134 Taf. 14,1; Wetzel 1976, 58 Nr. 17 Abb. 3,5; Nagel 1986a, 13 Nr. 2
    Märkisches Museum Berlin 1 II 9052 (Verlust)
    Grab?
    Armschutzplatte, Flintbeil, Gefäß (nicht überliefert)
11. **Lanz**, Kr. Prignitz *(Abb. 4,3)*
    Wetzel, 1967, 134 ff. Abb. 103 f.; Nagel 1986a, 13 Nr. 3; Wetzel 1976, 57 ff. Nr. 14 Abb. 1, 12–22; 2, 1–8; 3, 8–11
    Archäologisches Landesmuseum Mecklenburg-Vorpommern 65/19 u. 66/39
    Siedlung
    1 Armschutzplattenfragment, 1 Pfeilglätter, 1 Bernsteinperle, zahnstockverzierte Scherben von Zonenbechern

12. **Liepen** (Fpl. 5), Gem. Gielow, Kr. Demmin
Wetzel 1976, 58 Nr. 10; Nagel 1986a, 13 Nr. 4
Mus. Waren IV/66/342a–c
Siedlung?
1 Armschutzplatte aus rotem Schiefer, 3 Flintbeile, geglättete Scherben teilweise mit Knubbenverzierung

13. **Luckenwalde**, Kr. Teltow-Fläming
Wetzel 1976, 58 (o. Nr., nicht kartiert)
Mus. Luckenwalde (Verlust)
Glockenbecher

14. **Mechow**, Gem. Dolgen, Kr. Mecklenburg-Strelitz *(Abb. 4,4)*
Bastian 1938,37; Schroeder 1951, 30, 134 Taf. 14.2; Hollnagel 1958, 45; Wetzel 1976, 58, Nr. 16; Nagel 1986a, 14 Nr. 5
Mus. Neustrelitz (Verlust)
Grab
Randscherben von zonenverzierten Bechern, unverzierte Armschutzplatte aus Kalkstein

15. **Muchow** (Fpl. 11), Kr. Ludwigslust
Wetzel 1967, 165 Abb. 121; Wetzel 1976, 59, 60 Abb. 2,9–15 Nr. 13
Museumsdepot Ludwigslust 0439
Siedlung?
Rand- und Wandscherben von Bechern mit Zahnstockverzierung, Flintartefakte und unverzierte Scherben

16. **Muchow** (Fpl. 4), Kr. Ludwigslust
Wetzel 1976, 60 Nr. 12
Museumsdepot Ludwigslust 0467 a–b”
Einzelfunde aus junbronzezeitlichen Gräbern
Komplex 1: 2 zahnstockverzierte Scherben
Komplex: 6 zahnstockverzierte Scherben

17. **Pasewalk**, Kr. Ucker-Randow *(Abb. 4,5)*
Nagel 1986a, 14 Nr. 6, Abb. 2o, Taf. 2d
Mus. Waren IV/83/820
Armschutzplatte

18. **Penzin**, Kr. Güstrow *(Abb. 2,2)*
Hollnagel, 1957, 228f. Abb. 164; Wetzel 1976, 59f. Nr. 2, Abb. 2,16
Mus. Güstrow
Einzelgrab
Becher mit Zahnstockverzierung

19. **Pinnow**, Kr. Uckermark *(Abb. 2,4)*
Schroeder 1951, 31,39,41,45,70 Anm. 1, 134 Taf. 14,4; Wetzel 1976, 60 Nr. 19, Abb. 2,17
Mus. Vorgesch. Berlin If 8141 (Kriegsverlust)
Grab?
Glockenbecher mit Zahnstockverzierung

20. **Potsdam-Bornim**, Kr. Potsdam
Wetzel 1976, 60 (nicht kartiert o.Nr.)
Brandenburgisches Landesmuseum
Einzelfund
Randscherbe eines Bechers mit Zonenverzierung

21. **Raden**, Gem. Lalendorf, Kr. Güstrow
Wetzel 1976, 62 Nr. 6
Mus. Güstrow
Einzelfund aus jungbronzezeitlichem Grab
1 Flintsichelfragment Typ? Scherbe eines Becher mit horizontalen Zahnstocklinien

22. **Redderstorf** (Fpl. 25), Kr. Nordvorpommern
Schirren 1997, 29 ff. Abb. 1
Archäologisches Landesmuseum Mecklenburg-Vorpommern
Siedlung
Zahnstockverzierte Keramik, horizontale Verzierungen, ca. 10 Gefäße rekonstruierbar, nach Schirren überwiegend kleinesförmige Becher

23. **Schlieben**, Kr. Elbe-Elster *(Abb. 4,7)*
Wetzel 1976, 61, Abb. 3,8 (o. Nr.)
Mus. Herzberg
Einzelfund
Fragment einer Armschutzplatte

24. **Strodehne** (?), Kr. Havelland
Wetzel 1976, 61, 63 f., Abb. 3,4 (o.Nr.)
Mus. Neuruppin 776–777
Siedlung
Randscherbe eines Bechers mit Zahnstockverzierung

25. **Strodehne** (Fpl. 8), Kr. Havelland
Wetzel 1976, 63 Nr. 23, Abb. 2, 21–28.26.29.30
Siedlung
Mus. Rathenow III 1964/18, 38"
Becherscherben mit Zonen- und Metopenverzierung, Flintartefakte

26. **Strodehne** (Fpl. 9), Kr. Havelland
Wetzel 1976, 63 Nr. 25 Abb. 3,1–3
Mus. Rathenow III 1964/17"
Siedlung
Zahnstockverzierte Scherben von einem Becher mit Metopenverzierung

27. **Techentin**, Kr. Ludwigslust *(Abb. 4,6)*
Nagel 1986a, 10 Nr. 53 Abb. 2n. Taf. 2e
Museumsdepot Ludwigslust 08961; 1352/1–4; 1389; 1390
Siedlung
Armschutzplatte, zahnstockverzierte Keramik, Flintartefakte u.a. 1 „*madknife*“ mit halber Parallelretusche

28. **Valluhn,** Kr. Ludwigslust *(Abb. 4,8)*
Wetzel 1976, 64 Nr. 7, Abb. 3,6; Nagel 1986a, 14 Nr. 8
Archäologisches Landesmuseum Mecklenburg-Vorpommern 4603
Einzelfund
Armschutzplatte

Literatur

Agthe M. 1989. Bemerkungen zu Feuersteindolchen im nordwestlichen Verbreitungsgebiet der Aunjetitzer Kultur. *Arbeits- und Forschungsberichte zur sächsichen Bodendenkmalpflege* 33, 15–113.

Bastian W. 1938. Schweriner Arbeitsbericht 1937. *Nachrichtenbl. Dt. Vorzeit* 14, 33 ff.

Behrens H. 1969. Westliche Einflüsse bzw. Einflüsse der Glockenbecherkultur bei den Becherkulturen der DDR. In: H. Behrens / F. Schlette (Hrsg.), *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen.* Veröffentlichungen des Landesmuseums für Vorgeschichte in Halle 24 143–154. Berlin.

Besse M. 1996. *Le Campaniforme en France. Analyse de la céramique d'accompagnement.* British Archaeological Reports. International Series 635. Oxford.

Buchvaldek M. 1967. *Die Schnurkeramik in Böhmen.* Acta Universitatis Carolinae 19. Prag.

Bruchhaus H. / Neubert A. 2001. Zur Rekonstruktion endneolithischer und frühbronzezeitlicher Bevölkerungen im Mittelelbe-Saale-Gebiet- Ergebnisse einer ersten Bestandsaufnahme. In: J. Müller, Radiokarbonchronologie – Keramiktechnologie – Osteologie – Anthropologie – Raumanalysen. Beiträge zum Neolithikum und zur Frühbronzezeit im Mittel-Elbe-Saale-Gebiet. *Berichte der RGK* 80, 2000, 122–147.

Fritsch B. / Müller J. 2002. Monumente der Steinzeit. Die Megalithgräber der Altmark. In: H. Bock (Hrsg.), *Hünengräber – Siedlungen – Gräberfelder.* Archäologie in der Altmark 1, 63–73. Oschersleben.

Glob P.V. 1945. *Studier over den Jyske Enkeltkgravskultur.* Aarbøger for Nordisk Oldkyndighed og Historie 1944. København.

Hollnagel A. 1958. *Die vor- u. frühgeschichtlichen Denkmäler und Funde des Kreises Neustrelitz.* Die vor- u. frühgesch. Denkm. u. Funde im Gebiet der DDR 1. Schwerin.

Hollnagel A. 1957. Kurze Fundberichte. *Jahrbuch für Bodendenkmalpflege in Mecklenburg* 1955, 228.

Jacobs J. 1991. *Die Einzelgrabkultur in Mecklenburg-Vorpommern.* Beitr. Ur- u. Frühgesch. Mecklenburg-Vorpommerns 24. Schwerin.

Kirsch E. 1993. *Funde des Mittelneolithikums im Land Brandenburg.* Forschungen zur Archäologie im Land Brandenburg 1. Potsdam.

Kirsch E. 1994. *Beiträge zur älteren Trichterbecherkultur in Brandenburg.* Forschungen zur Archäologie in Brandenburg 2. Potsdam.

Konczak R. 1998. Einsatzstücke aus Silexabschlägen – ein Gerätetyp des Spätneolithikums. *Archäologische Berichte aus Mecklenburg-Vorpommern* 5, 30–40.

Kühn H.J. 1979. *Das Spätneolithikum in Schleswig-Holstein.* Offa-Bücher 40. Neumünster.

Lanting J.N. 1973. Laat-Neolithikum en Vroege Bronstijd in Nederland en N.W.-Duitsland: Continue ontwikkellingen. *Palaeohistoria* 15, 215–317.

Leube A. 1993–94. Steinpflaster auf Knüppelrost. Neue erfolgreiche Untersuchungen in Herzsprung, Landkreis Uckermark. *Archäologie in Berlin und Brandenburg*, 86–87.

Lomborg E. 1973. *Die Flintdolche Dänemarks. Studien über Chronologie und Kulturbeziehungen des südskandinavischen Spätneolithikums.* Nordiske Fortidsminder N.F. 1. København.

Midgley M.S. 1992. *TRB Culture. The first farmers of the North European Plain.* Edingburgh.

Müller J. 2001a. Radiokarbonchronologie – Keramiktechnologie – Osteologie – Anthropologie – Raumanalysen. Beiträge zum Neolithikum und zur Frühbronzezeit im Mittel-Elbe-Saale-Gebiet. *Berichte der RGK* 80, 1999, 25–211.

Müller J. 2001b. Radiokarbonchronologie – Keramiktechnologie – Osteologie – Anthropologie – Raumanalysen. Beiträge zum Neolithikum und zur Frühbronzezeit im Mittel-Elbe-Saale-Gebiet. *Berichte der RGK* 81, 2000, 37–128.

Müller J. 2001c. *Soziochronologische Studien zum Jung- und Spätneolithikum im Mittelelbe-Saale-Gebiet (4100–2700 v. Chr.).* Vorgeschichtliche Forschungen. Rahden/Westf.

Nagel E. 1986a. Die spätneolithischen Funde vom Fundplatz 5 in Techenthin, Kr. Ludwigslust. *Bodendenkmalpflege in Mecklenburg*, 7–18.

Nagel E. 1986b. Neolithische Siedlungsfunde der Trichterbecherkultur aus Lindenbeck, Kreis Lübz. *Bodendenkmal-pflege in Mecklenburg* 1985, 87–98.

Neumann G. 1969. Die Glockenbecherkultur im Spiegel einiger thüringischer Siedlungsplätze. In: Behrens H. / Schlette F. (Hrsg.), *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen.* Veröffentlichungen des Landesmuseums für Vorgeschichte in Halle 24, 131–142. Berlin.

Nilius I. 1967. Ein spätneolithisches Steinpackungsgrab aus der Gemarkung Ziesendorf, Kr. Rostock. *Ausgrabungen und Funde* 12, 184–188.

Nilius I. 1971. *Das Neolithikum in Mecklenburg zur Zeit und unter besonderer Berücksichtigung der Trichterbecherkultur.* Beiträge zur Ur- und Frühgeschichte der Bezirke Rostock, Schwerin und Neubrandenburg 5. Schwerin.

Nilius I. 1978. Zwei neolithische Steinkisten aus dem Bezirk Neubrandenburg. *Bodendenkmalpflege in Mecklenburg*, 7–30. Berlin.

Preuß J. 1980. *Die altmärkische Gruppe der Alttiefstichkeramik.* Berlin.

Raddatz K. 1952. Funde der Glockenbechekultur aus Battin, Kr. Prenzlau. *Germania* 30, 379–381.

Rassmann K. 1993. *Spätneolithikum und frühe Bronzezeit im Flachland zwischen Elbe und Oder.* Beitr. Ur- u. Frühgesch. Mecklenburg-Vorpommerns 28. Lübstorf.

Rassmann K. 1996. Zum Forschungsstand der absoluten Chronologie der frühen Bronzezeit in Mitteleuropa auf der Grundlage von Radiokarbondaten. *Acta Archaeologica* 67, 199–209.

Rassmann K. 2001. Vortrag zur Jahressitzung 2000 der Römisch-Germanischen Kommission. Die Nutzung Baltischen Feuersteins an der Schwelle zur Bronzezeit – Krise oder Konjunktur der Feuersteinverarbeitung? *Berichte der RGK* 81, 2000, 5–36.

Rassmann K. Feuerstein und früheste Bronze - Spätneolithikum und frühe Bronzezeit im Odermündungsgebiet. In: E. Gringmuth-Dallmer / E. Schultze (Hrsg.), *Forschungen zu Mensch und Umwelt im Odergebiet in ur- und frühgeschichtlicher Zeit.* Römisch-Germanische Forschungen 61. Mainz (im Druck).

Salanova L. 2000. *La question du Campaniforme en France et dans les îles anglo-normandes: productions, chronologies et rôles d'un standard céramique.* Mémoires de la Société Préhistorique Française 27. Paris.

Schirren C.M. 1997. Neue Funde des Spätneolithikums aus Mecklenburg und Vorpommern. *Archäologische Berichte aus Mecklenburg-Vorpommern* 4, 29–35.

Schmidt V. 1995. Ein Hügelgrab der Einzelgrabkultur bei Schwanbeck, Kr. Mecklenburg-Strelitz. *Ausgrabungen und Funde* 40, 145–149.

Schoknecht U. 1977. Neolithische Flachgräber im Bezirk Neubrandenburg. *Bodendenkmalpflege in Mecklenburg* 1976, 23–48.

Schroeder R. 1951. *Die Nordgruppe der Oderschnurkeramik*. Vorgeschichtliche Forschungen 14. Berlin.

Schuldt E. 1969. Die große Kammer von Klein Görnow, Kreis Sternberg. *Bodendenkmalpflege in Mecklenburg* 1967, 53–65.

Schuldt E. 1972. *Die mecklenburgischen Megalithgräber*. Beitr. Ur-Frühgesch. Bezirke Rostock, Schwerin u. Neubrandenburg 6. Berlin.

Schuldt E. 1975. Die Nekropole von Wollschow, Kr. Pasewalk, und das Problem der neolithischen Steinkisten in Mecklenburg. *Bodendenkmalpflege in Mecklenburg* 1974, 77–144.

Schwenzer S. 2002. Zur Frage der Datierung der Melzer Stabdolche. *Praehistorische Zeitschrift* 77, 76–83.

Strahl E. 1986. *Das Endneolithikum im Elb-Weser-Dreieck. Ein Beitrag zu den Funden und Befunden unter besonderer Berücksichtigung der Keramik.* Dissertation. Universität Saarbrücken. Saarbrücken.

Struve K.W. 1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen*. Offa-Bücher 11. Neumünster.

Szczesiak R. 1999. Eine bemerkenswerte frühbronzezeitliche Siedlung bei Neuenkirchen, Landkreis Mecklenburg-Strelitz. In: Budesheim W. / Keiling H. (Hrsg.), *Zur Bronzezeit in Norddeutschland.* Freie Lauenburgische Akademie für Wissenschaft und Kultur. Beiträge für Wissenschaft und Kultur 3, 107–122. Neumünster.

Wetzel G. 1969. Ein Dünenwohnplatz bei Lanz, Kreis Ludwigslust. *Jahrbuch für Bodendenkmalpflege in Mecklenburg* 1967, 129–169.

Wetzel G. 1976. *Die Funde der Glockenbecherkultur östlich der Elbe auf dem Gebiet der DDR.* Veröffentlichungen des Museums für Ur- und Frühgeschichte Potsdam 10, 55–74. Berlin.

Wetzel G. 1996. Das Neolithikum im westlichen Odergebiet. In: Leciejewicz L. / Gringmuth-Dallmer E. (Hrsg.), *Człowiek a środowisko w środkowym i dolnym Nadodrzu / Mensch und Umwelt im mittleren und unteren Odergebiet*, 61–66. Wrocław.

Wiermann R. 1995. 2.2. Mecklenburgische Gruppe: Mecklenburg-Vorpommern. In: Strahm C. (Hrsg.), *Das Glockenbecher-Phänomen. Ein Seminar*, 112–122. Freiburg i.Br.

Vandkilde H. 1993. Aspects of technology and society in the transitional period between Stone and Bronze Age in Denmark. In: *Actes du 12e Congrès UISPP 3*, 13–20. Nitra.

Wolff C. 1991. Zislow und das Früh- bis Ältere Neolithikum im ehemaligen Bezirk Neubrandenburg. In: *Zislow. Ergebnisse archäologischer Untersuchungen.* Beitr. Ur.- u. Frühgesch. 25, 17–54. Schwerin.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

DIE GLOCKENBECHERKULTUR IN MITTELDEUTSCHLAND. EIN ZWISCHENBERICHT

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Seit nunmehr 5 Jahren beschäftige ich mich im Rahmen einer Dissertation mit der Glockenbecherkultur in Mitteldeutschland. Dass ich mich damit einem Desiderat widme, ist unbestritten. Blickt man kurz in die Forschungsgeschichte, so liegt die letzte umfassende Bearbeitung des Themas bereits über 50 Jahre zurück (SCHLETTE 1948). Dem Interessierten stehen an jüngerer Literatur nur die Ausführungen im Überblickswerk zur Jungsteinzeit im Mittelelbe-Saale-Gebiet (BEHRENS 1973) zur Verfügung. Lesenswert sind natürlich auch die Publikation von T. Puttkammer (PUTTKAMMER 1994) sowie die Zusammenstellung von A. Wiechmann (WIECHMANN 1995). Das Thema „Glockenbecherkultur in Mitteldeutschland“ ist jedoch auch deshalb ein Desiderat, weil der Zeithorizont in den letzten Jahren vielfach Gegenstand relevanter Fundaufarbeitungen war und stets im Hinblick auf die Glockenbecherkultur ein entsprechendes Defizit beklagt werden mußte.

So mußte Bernd Zich in seinem Werk (ZICH 1996) zur Aunjetitzer Kultur in Mitteldeutschland von dem damaligen unbefriedigenden Forschungsstand ausgehen, was dazu führte, dass er die wenigen vorzuführenden Kontaktfunde stets an den Beginn seiner Seriationsmatrix stellte. Ein breites Nebeneinander wenigstens eines erheblichen Teiles der Glockenbecherkultur und eines vielleicht ebenso erheblichen Teiles der Aunjetitzer Kultur, das spätestens seit Hermann Behrens (BEHRENS 1973) zu konstatieren war und schließlich von Detlef W. Müller und Adolf Siebrecht anläßlich der Vorlage des Gräberfeldes von Deesdorf anhand einer ausführlichen Fundmaterialanalyse untermauert wurde (MÜLLER / SIEBRECHT 1985), konnte so nicht Berücksichtigung finden, kam aber dann in der Abbildung 13 zum Ausdruck (ZICH 1996, 341).

Ebenso unbefriedigend blieben m. E. die Versuche, das Verhältnis der Glockenbecherkultur zu den Schnurkeramischen Gruppen zu bestimmen, die reihum eine Aufarbeitung erfuhren (HEIN 1987; BERAN 1990; STOCK 1998). An verschiedenen Stellen zeigte sich sogar eine Kontinuität von der Schnurkeramik zur Aunjetitzer Kultur, so daß z. B. Torsten Schunke im Zusammenhang mit der Materialvorlage der Aunjetitzer Siedlung von Zwenkau (SCHUNKE 2000) dem Autor in einem persönlichen Gespräch mitteilen mußte, dass für die Glockenbecherkultur eigentlich kein Platz vorhanden sei.

Doch das soll natürlich nicht das letzte Wort zur Glockenbecherkultur geblieben sein. Aus den bisherigen Worten war zu entnehmen, dass meine Arbeit bislang nicht abgeschlossen ist, so dass ich derzeit noch nicht der Lage bin, an dieser Stelle ein umfassendes und zufriedenstellendes Bild der Glockenbecherkultur in Mitteldeutschland zu liefern. Dennoch möchte ich hier zumindest einen Überblick zum Thema geben und darstellen, auf welcher Basis der Versuch der Neubearbeitung gründet.

Konnte Hermann Behrens von ca. 300 Fundstellen der Glockenbecherkultur in Mitteldeutschland ausgehen (BEHRENS 1973, 157), so hat sich dieses Bild derzeit mit etwa 504 Fundstellen und mit ca. 800 Befunden erheblich verdichtet (Abb. 1). Bei einem entsprechend guten Kontakt zu den örtlichen Grabungsleitern kann sich diese Zahl durchaus monatlich erhöhen. Auf diesen Fundstellen konnten etwa 400 Grabfunde und ebenso viele Einzelfunde ermittelt werden. Hinsichtlich der Siedlungen bleibt das gegenwärtige Bild ähnlich unbefriedigend wie bereits von Gotthard Neumann (NEUMANN 1929) und Friedrich Schlette (SCHLETTE 1948) konstatiert.

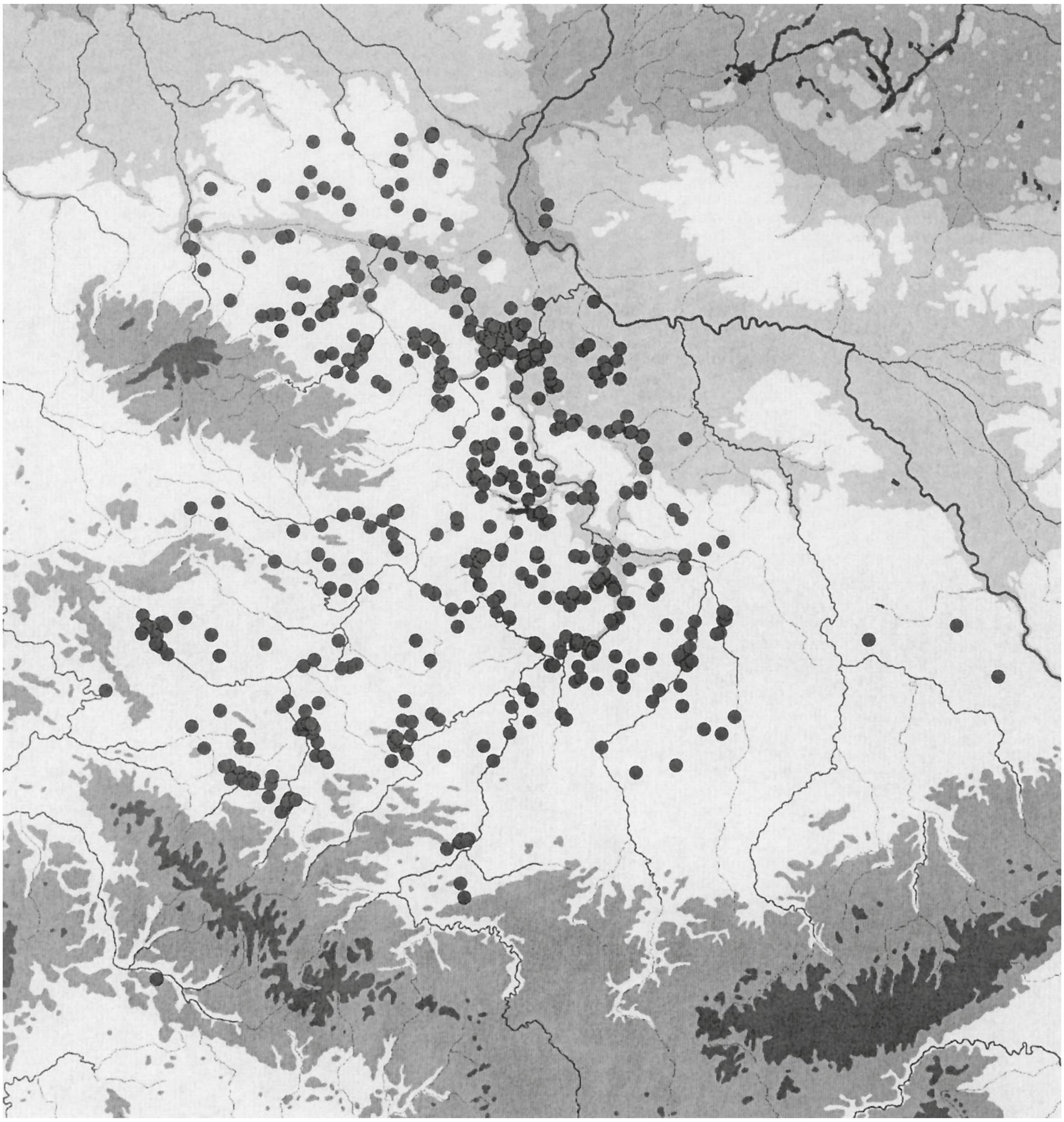

Abb. 1. Verbreitungskarte der mitteldeutschen Glockenbecherkultur.

Auf der Karte (Abb. 1) wurde das entsprechende Verbreitungsgebiet dargestellt. Diesem Bild zugrunde gelegt wurden alle Fundstellen mit sicherer und wahrscheinlicher Glockenbecher-Keramik. Nicht berücksichtigt wurden diverse Steingerätefunde wie Armschutzplatten und Pfeilschaftsglätter, da Erstere anzunehmender Weise einen hohen Verschleppungsquotienten aufweisen können und beide einen hohen Anteil nicht eindeutig der Glockenbecherkultur zuzuweisender Exemplare führen.

Eine Gegenkartierung einschließlich der sicher dazugehörenden Steingeräte (Armschutzplatten, Pfeilschaftsglätter, etc.) würde ein ähnliches Bild ergeben, jedoch greift in diesem Fall das erfasste Territorium z. T. deutlich über das vor allem durch die Grab- und charakteristischen Einzelfunde definierte und dargestellte Verbreitungsgebiet hinaus.

Die westliche Besiedlungsgrenze im heutigen Land Niedersachsen ist quasi forschungsbedingt, da hier nur bereits veröffentlichte Funde berücksichtigt werden konnten. Dagegen scheinen sowohl die nördliche als auch die östliche und südliche Grenze des Verbreitungsgebietes die tatsächlichen Verhältnisse widerzuspiegeln. Das Bild einer relativ geringen Besiedlungsdichte der Glockenbecherkultur in Thüringen ist vermutlich dagegen wieder forschungsbedingt.

Einzelne Fundorte liegen abseits der zusammenhängenden Fundstellenwolken. Hier sind insbesondere die einzeln liegenden Fundorte Sachsens sowie die östlich der Elbe erfassten Fundpunkte zu erwähnen.

Außerhalb des beschriebenen Verbreitungsgebietes, insbesondere in den nördlichen Teilen des heutigen Regierungsbezirkes Magdeburg finden sich Funde, die ebenfalls der Glockenbecherkultur zugeordnet werden können und von Günter Wetzel zusammengestellt wurden (WETZEL 1976). Jedoch handelt es sich hierbei ausschließlich um Einzelfunde, zum Teil auch indifferenter Art. Da sie bereits katalogmäßig erfasst waren und im Zusammenhang mit der Materialaufnahme sich keine weiteren Zuwächse ergaben, wurden diese Gebiete nicht gesondert berücksichtigt. Die von Günter Wetzel vorgelegte Verbreitungskarte (WETZEL 1976, Abb. 5) lässt erkennen, dass diese Fundorte vermutlich Ausläufer einer weiteren, in meiner Arbeit nicht näher betrachteten Gruppe der Glockenbecherkultur sind, die ihren Schwerpunkt eher im Raum Mecklenburg-Vorpommern hat.

Das erhebliche Baugeschehen seit der Wiedervereinigung Deutschlands 1990 hat auch für die Erforschung der Glockenbecherkultur Mitteldeutschlands erhebliche Vorteile erbracht. Würde man die gut dokumentierten Gräber und Einzelfunde nach dieser zeitlichen Zäsur getrennt auflisten, so würde deutlich, daß von den insgesamt zur Verfügung stehenden 400 Gräbern ein erheblicher Teil erst nach 1990 ausgegraben wurde und daher meist modern dokumentiert vorliegt. Zufriedenstellender Weise stehen damit auch einige offensichtlich vollständig erfaßte Grabgruppen zur Auswertung zur Verfügung. Leider ist der größte Teil dieser neu gegrabenen Befunde gar nicht oder an nur schwer zugänglicher Stelle veröffentlicht worden (z. B. ARNDT 1999; SCHMIDT 1999). Als großer Mangel ist festzuhalten, dass bislang nur wenige Gräber modern anthropologisch bearbeitet wurden, dies ist angesichts der verbreiteten Charakterisierung der Glockenbecherkultur als einer „reinen“ Gräberkultur höchst bedauerlich. Die meisten älteren anthropologischen Bestimmungen müssen heute wohl lediglich unter der Rubrik „Forschungsgeschichte“ betrachtet werden. Einige modern durchgeführte anthropologische Bearbeitungen liegen jedoch vor, insbesondere der Gräber, die jüngst einer C-14 Datierung unterzogen wurden (KAISER / PICHLER 1999). Dort, wo ein Vergleich mit der archäologischen Befundlage möglich war, ist die archäologisch determinierte Geschlechtsbestimmung bestätigt worden (BRUCHHAUS / NEUBERT 1999). Dies gilt insbesondere für die Orientierung der Bestatteten, wo die anthropologischen Bestimmungen die geschlechtsdeterminierte Grabausrichtung meist bekräftigte, also Männer mit dem Kopf im Norden und Frauen mit dem Kopf im Süden, beide mit dem Blick nach Osten.

An dieser Stelle sei kurz auf die genannten C-14 Datierungen eingegangen. C-14 Datierungen sind natürlich hilfreich für die Einordnung der Befunde in den zeitlichen Ablauf der jeweiligen Kulturen. Bis heute sind 12 neue C-14 Datierungen bekannt geworden (MÜLLER 1999, Liste 1). Dazu kommen noch einige wenige ältere Datierungen, die dennoch heutigen Ansprüchen gewachsen sind. Diese C-14 Datierungen sind nun räumlich sehr ungünstig verteilt, wobei natürlich zu bemerken ist, dass die Auswahl des Fundmaterials leider nicht nach fachlichen Gesichtspunkten erfolgen konnte. Die Fundorte konzentrieren sich im Raum Mansfeld/Bernburg. Da bezüglich der archäologischen Zusammenhänge bislang nur die entsprechenden Funde präsentiert wurden (MÜLLER 1999, Abb. 18), sollen hier nun einige Ausführungen zu den Befunden folgen.

Die 3 Gräber aus Egeln, Galgenberg, Landkr. Aschersleben-Staßfurt, sind sämtlichst undokumentierte Altfunde, wobei der kammstempelverzierte Glockenbecher mit einer roten und gewölbten Armschutzplatte vergesellschaftet war. Leider gilt diese als verschollen.

Besser sieht es mit den Fundumständen bei dem Grab von Rathmannsdorf, Landkr. Aschersleben-Staßfurt, aus (HOFFMANN 1951, 220, Taf. XLII). Der Glockenbecher stammte aus einem Steinkistengrab und war zudem mit einer signifikanten Tasse vergesellschaftet. Der Tote wurde als männlich bestimmt (KAISER / PICHLER 1999, 175), was gut mit der beobachteten Grabausrichtung, es handelte sich um einen linken Hocker, übereinstimmte. Leider enthielt das Grab noch einen weiteren Toten, der als weiblich bestimmt wurde; die C-14 Datierung ergab zudem eine frühmittelalterliche Zeitstellung (MÜLLER 1999, 87). Inwieweit daher das Grab als gestört betrachtet werde muß, kann an dieser Stelle nicht beurteilt werden. Der archäologische Kontext des Glockenbechergrabes erscheint jedoch als schlüssig.

Das Grab 1 des Friedhofes von Cörmigk-Sixdorf, Landkr.Berburg, fällt leider ebenfalls aus dem Rahmen. Gemäß Befundbeschreibung soll es sich um einen in einer Steinkiste bestatteten West-Ost ausgerichteten Strecker gehandelt haben, beides Umstände, die völlig untypisch für die Glockenbecherkultur sind und erhebliche Zweifel an der Befundlage aufkommen lassen. Besser sieht es dagegen für das Grab 1 der Grabgruppe von Löbnitz, Kiesgrube Neugattersleben, Landkr. Schönebeck, aus. Hierfür liegen bekanntlich mehrere Meßergebnisse vor, wobei sowohl Skelettreste als auch Holzreste der erfaßten hölzernen Grabkammer beprobt wurden (Rassmann 1993). Der Befund wurde bereits 1969 vorgestellt (Kaufmann 1969, 27 - 31, Abb. 1 u. 2, Taf. IV b). Grab 1 war demnach ein Nord-Süd ausgerichteter linker Hocker, der neben einem schnittlinienverzierten Glockenbecher einige markante Silexpfeilspitzen und einen Eberhauer enthielt.

Der kammstempelverzierte Glockenbecher aus Köthen, Gütersee, Landkr.Köthen, stammt ebenfalls aus einem Grab mit NW-SO ausgerichteten, linken Hocker, Blick Ost. Hier bereitet die Bestimmung des Geschlechtes mit weiblich (Kaiser / Pichler 1999, 171) erhebliche Schwierigkeiten. Dies gehört zu den wenigen modern abgesicherten Ausnahmen hinsichtlich der geschlechtsdeterminierten Seitenlage.

Diese stimmte wiederum beim Grab aus Gröna mit der anthropologischen Bestimmung überein. Der als männlich bestimmte Tote war als Nord-Süd ausgerichteter, linker Hocker bestattet worden, übrigens wieder in einer Steinkiste.

Das C-14 datierte Grab von Hedersleben fällt durch sein Beigabenreichtum auf, insbesondere durch das ungewöhnliche Typenspektrum an Silexgeräten. Zu den Seltenheiten zählen jedoch auch die Bernsteinperlen. Auch hier war der Tote als Nord-Süd ausgerichteter linker Hocker bestattet worden. Allerdings sind keine Grabungszeichnungen oder Photos bekannt geworden (Marschall 1969, 31 - 33, Taf. 5).

Ein rechter Hocker lag dagegen beim Grab 16 der Nekropole von Nohra vor (Schmidt-Thielbeer 1955, Taf. XIII.3). Das Besondere dieses Grabes liegt zum einem in dem Umstand begründet, daß es Teil eines Gräberfeldes ist, das mehrfach Gegenstand von Betrachtungen des Verhältnisses von Glockenbecherkultur und Aunjetitzer Kultur war (zuletzt Agthe 1989), und zum anderen im ungewöhnlichen Beigabenspektrum. Etliche Steinbeile und Steinmeißel lassen den Verdacht aufkommen, daß es sich um ein Handwerkergrab handeln könnte. Die SSW-NNO ausgerichtete und als rechter Hocker niedergelegte Bestattung wurde als Mann bestimmt, was der Ausrichtung widersprechen würde. Leider wurde die anthropologische Bestimmung bislang nicht modern überprüft. Darüber hinaus ist der Befundzusammenhang nicht über alle Zweifel erhaben.

Die C-14 Datierungen geben immerhin einen breiten Spielraum zur Einordnung der Glockenbecherkultur im endneolithischen Kontext zu erkennen. Das Bild verkompliziert sich angesichts der Aussage, dass „Glockenbecher in Erscheinung treten, als komplexe „Mansfelder“ Verzierungsmuster auf Schnurbechern und –amphoren vorkommen“ (Müller 1999, 69). Diese durch C-14 Datierungen begründete Aussage einer Gleichzeitigkeit von „Mansfeld“ und wenigstens eines Teiles der Glockenbecherkultur impliziert ein breites räumliches Nebeneinander beider Gruppen. Inwieweit dies bei den bekannten hohen Fundstellenzahlen realistisch ist, muß vorläufig abgewartet werden.

Die Glockenbecherkultur Mitteldeutschland kann mittlerweilen einen Goldfund aufweisen. Die Erstpublizierung erfolgte bereits in ”Archäologie in Deutschland“ (Campen 2001). Die Gesamtpublikation durch den Ausgräber ist derzeit in Vorbereitung. Leider ist der Fundort nicht in Sachsen-Anhalt lokalisiert sondern in Zwenkau, was in Sachsen liegt, soweit es nicht dem Braunkohlentagebau zum Opfer gefallen ist. Das Grab nun, welches die kleinen kreisrunden Goldplättchen enthielt, weist verschiedene Besonderheiten auf. Das sind zum einen die sehr kleinen kreisrunden Goldplättchen selbst. Dann enthielt das Grab verschiedene Steingeräte, also Steinbeil, Schleifplatten verschiedener Körnung, Pfeilschaftsglätter und ähnliches, was die Vermutung aufkommen läßt, daß es sich um eines der Mitteldeutschland äußerst seltenen Handwerkergräber handeln könnte. Eine weitere Besonderheit stellt das beigegebene Gefäß dar. Es handelt sich dabei um einen reichverzierten „böhmischen“ Becher, die insbesondere im Gebiet zwischen den Flüssen Saale und Weiße Elster verbreitet sind, aber auch in Thüringen vorkommen und zur sogenannten böhmischen Gruppe zählen, die ihren Namen durch Gotthard Neumann (Neumann 1929) aufgrund von auffälligen Parallelen in Böhmen bekommen hat. Eine Kartierung der bislang bekannten „böhmischen“ Becher legt offen, daß ihr Verbreitungsschwerpunkt vor allem im Gebiet zwischen Elster und Saale von dem der sonstigen Glockenbechern etwas abweicht. Es könnten sich hier zeitliche Differenzierungen andeuten. Die bislang geborgenen „böhmischen“ Becher

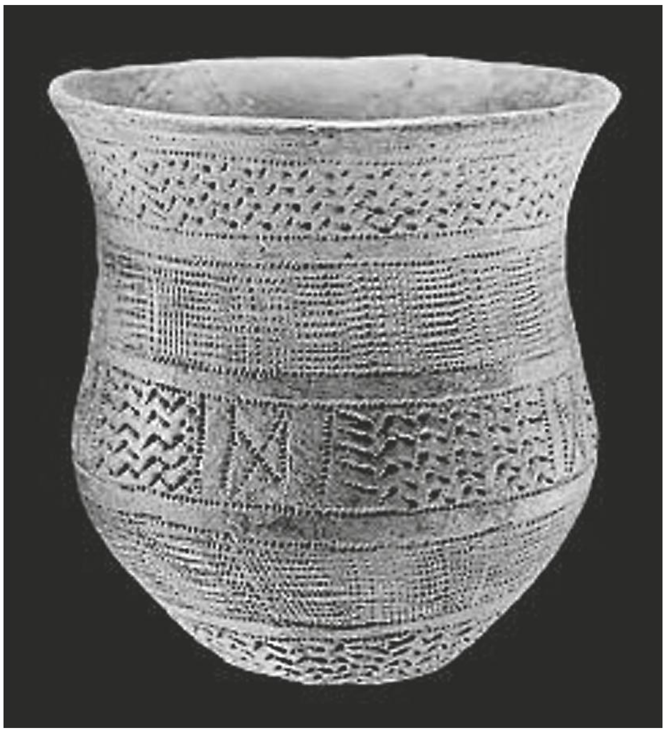

Abb. 2. Verzierter Glockenbecher von Neehausen, Ldkr. Mansfelder Land. Aufnahmen: J. Liptak, Stuttgart.

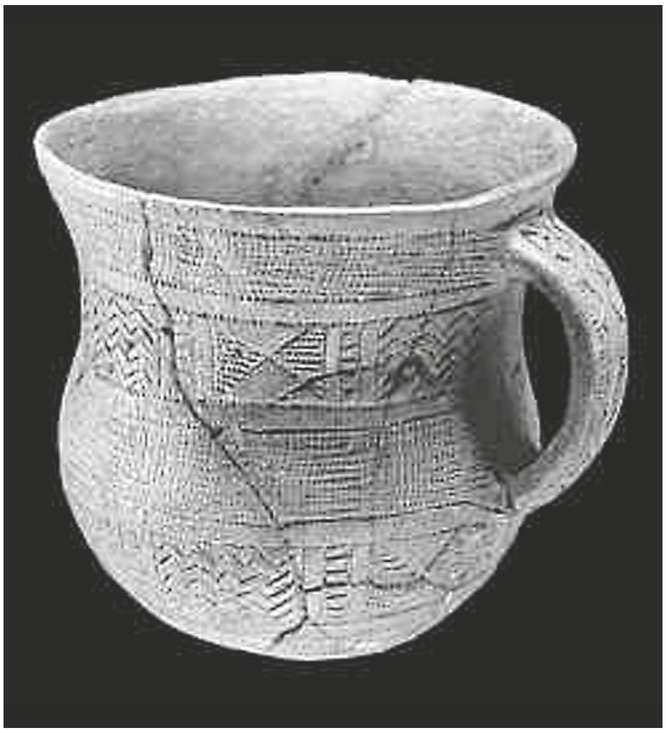

Abb. 3. Verzierter Glockenbecher von Neehausen, Ldkr. Mansfelder Land. Aufnahmen: J. Liptak, Stuttgart.

sind meist Altfunde, ohne daß besondere Fundumstände beobachtet oder bekannt wurden. Eine Ausnahme stellen die beiden Becher aus Neehausen dar (Abb. 2 und 3), von denen man weiß, daß sie aus einer gewaltigen Steinkiste stammen, allerdings bereits 1875 geborgen wurden. Die beiden Becher fanden Aufnahme in der Reihe von 120 bedeutenden Funden aus 120 Jahren Sammlungstätigkeit des Landesmuseums für Vorgeschichte Halle (Hille 2001).

Doch zurück zum Grab von Zwenkau. Eine weitere Besonderheit dieses Grabes stellt der Grabritus dar. Es ist nämlich ein Brandschüttungsgrab. Dabei handelt es sich um eine ausgesprochene Seltenheit in Mitteldeutschland. Bislang waren durchweg nur schlecht beobachtete Altfunde zu konstatieren. Nunmehr sind wir jedoch in der Lage, zwei regelgerechte Brandbestattungen, besser gesagt Brandschüttungsgräber, beide im Raum Leipzig gelegen, verzeichnen zu können. Neben dem erwähnten Grab aus Zwenkau wurde bei Meyhen, einem kleinen Ort südlich von Leipzig, nämlich noch ein weiteres, allerdings isoliert gelegenes Grab ausgegraben, das als Beigaben einen schnittlinienverzierten Glockenbecher sowie eine nicht näher zu spezifizierende Tasse enthielt (Gollwitzer 2000). Anthropologische Bestimmungen des Leichenbrandes liegen bislang für keines der Gräber vor.

Dieser kurze Exkurs durch verschiedene Aspekte der mitteldeutschen Glockenbecherkultur endet nun. Ziel vorstehender Ausführungen war es, zunächst einen Überblick über die Ausgangslage zur Neubearbeitung der mitteldeutschen Gruppe der Glockenbecherkultur zu geben. Ich hoffe, Interesse an dieser so reichhaltigen Kulturlandschaft geweckt zu haben.

Literatur

Agthe M. 1989. Bemerkungen zu Feuersteindolchen im nordwestlichen Verbreitungsgebiet der Aunjetitzer Kultur. *Arbeits- und Forschungsberichte zur sächsischen Bodendenkmalpflege* 33, 15–113.

Arndt F. 1999. Ein Gräberfeld der Glockenbecherkultur bei Hohenerxleben, Ldkr. Aschersleben-Staßfurt – Vorbericht. *Archäologische Berichte aus Sachsen-Anhalt* 1998 / II, 131–137.

Behrens H. 1973. *Die Jungsteinzeit im Mittelelbe-Saale-Gebiet*. Berlin.

Beran J. 1990. *Funde der Einzelgrabkultur im Bezirk Magdeburg*. Halle.

Bruchhaus H. / Neubert A. 1999. Zur Rekonstruktion endneolithischer und frühbronzezeitlicher Bevölkerungen im Mittelelbe-Saale-Gebiet – Ergebnisse einer ersten Bestandsaufnahme. *Bericht der Römisch-Germanischen Kommission* 80, 122–161.

Campen I. 2001. Grab eines steinzeitlichen Metallhandwerkers? *Archäologie in Deutschland* 2/2001, 50.

GOLLWITZER M. 2000. Eine ungewöhnliche Bestattung des Endneolithikums. Neues von der BAB 38. *Archäologie Aktuell*, 70–71.

HEIN M. 1987. *Untersuchungen zur Kultur der Schnurkeramik in Mitteldeutschland*. Bonn.

HILLE A. 2001. Böhmische Becher. In: *Schönheit, Macht und Tod. 120 Funde aus 120 Jahren Landesmuseum für Vorgeschichte Halle*, 60–61. Halle.

HOFFMANN W. 1951. Vorgeschichtliche Neufunde im Lande Sachsen-Anhalt. *Jahresschrift für mitteldeutsche Vorgeschichte* 35, 215–228.

KAISER E. / PICHLER S. 1999. Anthropologische Bestimmungen von Skeletten des Neolithikums und der Frühbronzezeit im Mittelelbe-Saale-Gebiet. *Bericht der Römisch-Germanischen Kommission* 80, 162–177.

KAUFMANN D. 1969. Zwei Gräber der Glockenbecherkultur mit Holzeinbauten von Löbnitz, Kr. Staßfurt. *Ausgrabungen und Funde* 14, 27–31.

MARSCHALL O. 1969, Ein Grab der Glockenbecherkultur mit Bernsteinschmuck bei Hedersleben, Kr. Eisleben. *Ausgrabungen und Funde* 14, 31–33.

MÜLLER D.W. / SIEBRECHT A. 1985. Ein Gräberfeld der späten Glockenbecherkultur vom „Hirtenberg" bei Deesdorf, Kr. Halberstadt. *Jahresschrift für mitteldeutsche Vorgeschichte* 68, 221–233.

MÜLLER J. 1999. Radiokarbonchronologie-Keramiktechnologie-Osteologie-Anthropologie-Raumanalysen. Beiträge zum Neolithikum und zur Frühbronzezeit im Mittelelbe-Saale-Gebiet. Teil 1. *Bericht der Römisch-Germanischen Kommission* 80, 25–89.

NEUMANN G. 1929. Die Gliederung der Glockenbecherkultur in Mitteldeutschland. *Praehistorische Zeitschrift* 20, 3–69.

PUTTKAMMER T. 1994. Glockenbecherkultur. In: BEIER H.-J. / EINICKE R. (Hrsg.), *Das Neolithikum im Mittelelbe-Saale-Gebiet und in der Altmark*. Beiträge zur Ur- und Frühgeschichte Mitteleuropas 4, 269–289. Wilkau-Hasslau.

RASSMANN K. 1993. *Spätneolithikum und frühe Bronzezeit im Flachland zwischen Elbe und Oder*. Lübstorf.

SCHLETTE F. 1948. Die Funde der Glockenbecherkultur im Lande Sachsen-Anhalt. *Strena Praehistorica*, 29–77.

SCHMIDT H. 1999. Totenkult in der Jungsteinzeit, Frühbronzezeit und Eisenzeit. In: *Archäologie an der Jagal*, 35–37. Wünsdorf / Dresden / Haale (Saale).

SCHMIDT-THIELBEER E. 1955. Ein Friedhof der frühen Bronzezeit bei Nohra, Kr. Nordhausen. *Jahresschrift für mitteldeutsche Vorgeschichte* 39, 93–114.

SCHUNKE T. 2000. Die keramischen Funde aus dem Bereich des Grabenwerkes der Aunjetitzer Kultur im Braunkohlentagebau Zwenkau-West, Ldkr. Leipziger Land. Ungedr. Magisterarbeit. Halle.

STOCK M. 1998. *Die Schnurkeramik in Sachsen-Anhalt und Thüringen auf Grund der Grabgefäße*. Weißbach.

WETZEL G. 1976. Funde der Glockenbecherkultur östlich der Elbe auf dem Gebiet der DDR. *Veröffentlichungen des Museums für Ur- und Frühgeschichte Potsdam* 10, 55–74.

WIECHMANN A. 1995. Elb-Saale-Gruppe: Sachsen, Thüringen, Sachsen-Anhalt. In: STRAHM CH. (Hrsg.), *Das Glockenbecher-Phänomen. Ein Seminar*, 96–111. Freiburg.

ZICH B. 1996. *Studien zur regionalen und chronologischen Gliederung der nördlichen Aunjetitzer Kultur*. Berlin – New York.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

THE NORTH-EASTERN BORDER OF INFLUENCE OF BELL BEAKERS IDEA

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Sweeping across almost all of South-Western, Western and Central Europe in the 3rd millennium B.C. (MÜLLER / VAN WILLIGEN 2001), the Bell Beaker cultural current established in all crucial regions its own agglomerations of different degree of cultural structure stability (HARRISON 1980; NICOLIS (ed.) 2001). However, literature of the subject has so far presented Bell Beakers as a phenomenon that was both spatially and culturally remote from the lowland areas of the Eastern part of Central Europe. It was only in recent years that a proposition concerning presence of varied and long-lasting cultural Bell Beaker structures in the lowland part of Europe west of the Vistula gained ground (CZEBRESZUK 2001). Several features that we know from those areas can be related to Bell Beakers (CZEBRESZUK / SZMYT 2001a). These include pottery features, i.e. the form (different bell beaker variations) and ornamentation of vessels (knurling, zone type – incl. the *Maritime Beaker* variety, zone-metopic as well as the *barbed wire* style). Other "Beaker" features are: archer wrist guards (CZEBRESZUK 2000), amber V-perforated buttons (CZEBRESZUK 2003) as well as incidental finds, such as flint and metal (CZEBRESZUK 2001, 144-146) halberds, gold and bronze lunulae, stone "belt fasteners" and anchor-shaped bone pendants. Flint daggers, which form a category of their own, deserve separate discussion.

The last of the above artefacts is very characteristic of the close of the Neolithic Age in the part of Europe under discussion (the stage referred to as *Dagger Time*, cf. LOMBORG 1973). So far, it has not been unequivocally related to Bell Beakers. However, daggers are an unchanging element of "the beaker furnishing". In the oldest beaker units of the lower Rhine, daggers (*Grand Pressigny* imports) are very frequent (LANTING / VAN DER WAALS 1976, 13-15), only to be in time supplanted by copper daggers. One can thus say that the idea of the dagger is closely related to the Bell Beaker tradition. Bearing this in mind, it comes as no surprise that in the discussed part of Europe production of flint daggers made of local, choice materials, should commence simultaneously with appearance of other Bell Beaker features (CZEBRESZUK 2001, 130-131).

In the European Lowland west of the Vistula, the genetic position of the Bell Beaker features is always the same: they appear at a subsequent stage of evolution of local Corded Ware culture, specifically in the Single Grave culture. However, a phenomenon of full replacement of "corded ware" features by "beaker" ones has not been observed. It is particularly evident in the basin of the Vistula and the Oder: Bell Beakers only enrich the repertory of the Corded Ware cultural traits (MAKAROWICZ 1998; CZEBRESZUK 2001), which is particularly evident with settlement data (LIVERSAGE 1987; MAKAROWICZ / CZEBRESZUK 1995). These are also grave sources that point to the closeness of Bell Beaker traits to the tradition of local varieties of the Corded Ware culture. No type of grave can be exclusively attributed to Bell Beakers (CZEBRESZUK 2001, 133).

The "Bell Beaker epoch" in the said area generally covers the second half of the 3rd millennium B.C. Such time span has been confirmed with a series of C^{14} datings, in particular concerning finds of the Limfjord region in Denmark (VANKILDE 1996) and the Kujawy region (CZEBRESZUK 2001, 140; CZEBRESZUK / SZMYT 2001).

Information that remains at our disposal justifies treatment of the problems in question as a single cultural process (phenomenon) in the entire area from Jutland to the Kujawy region. All previously mentioned observations legitimise the hypothesis of existence of a Northern European Bell Beaker province that covered the area from Jutland to the Vistula basin, within

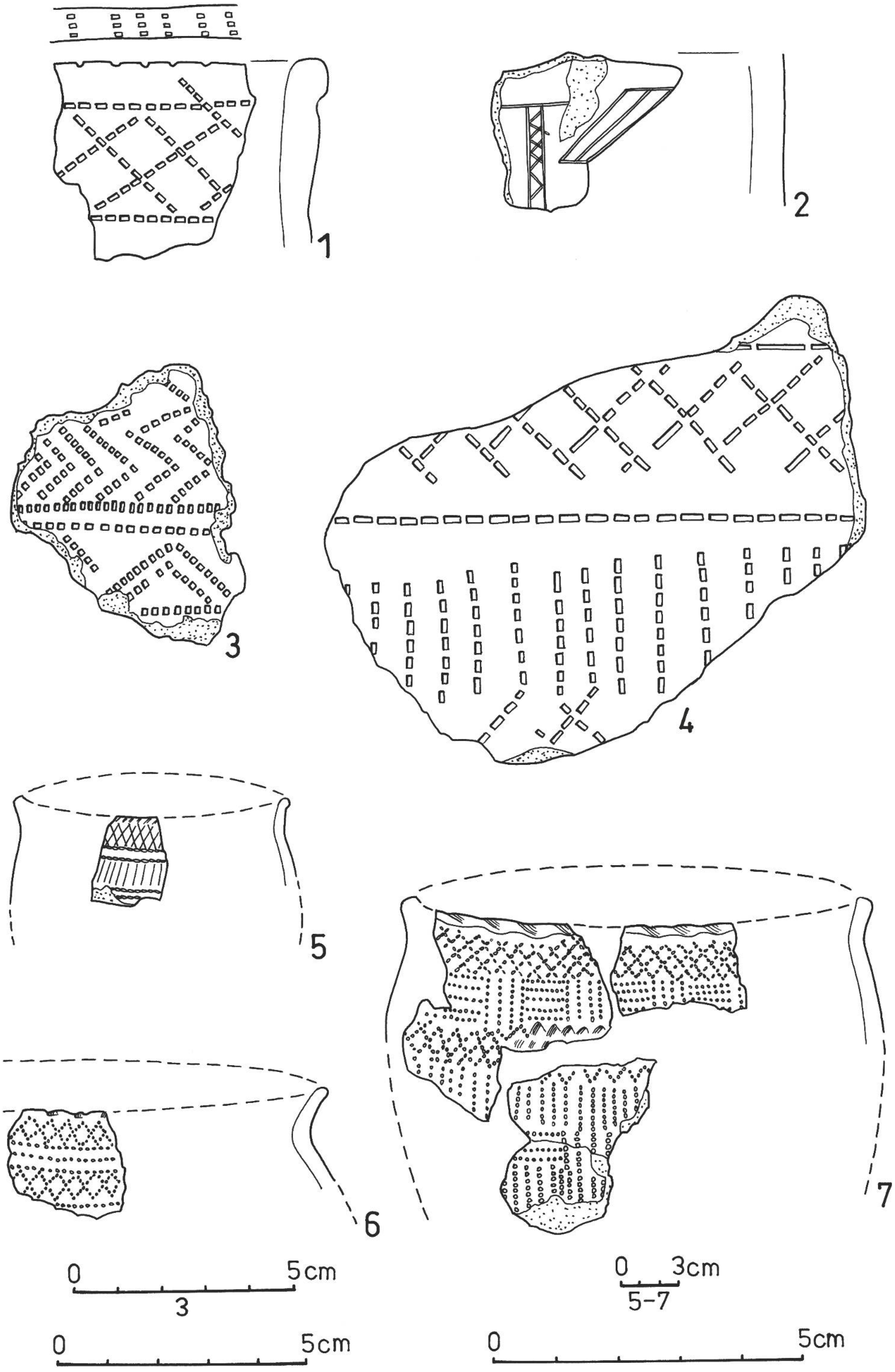
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Fig. 1. Selected pottery of Bell Beaker-associated decoration in the south-eastern Baltic zone. 1 - Asaviets 2 (research by M. Charniauski), 2 - Krasnaselski 5 (research by M. Charniauski), 3, 4 - Kryviny II (Zajkovski 1985, fig. 59: 11 and 64: 12), 5-7 - Abora I (Loze 1979, table XLVI: 1, 2, 5)

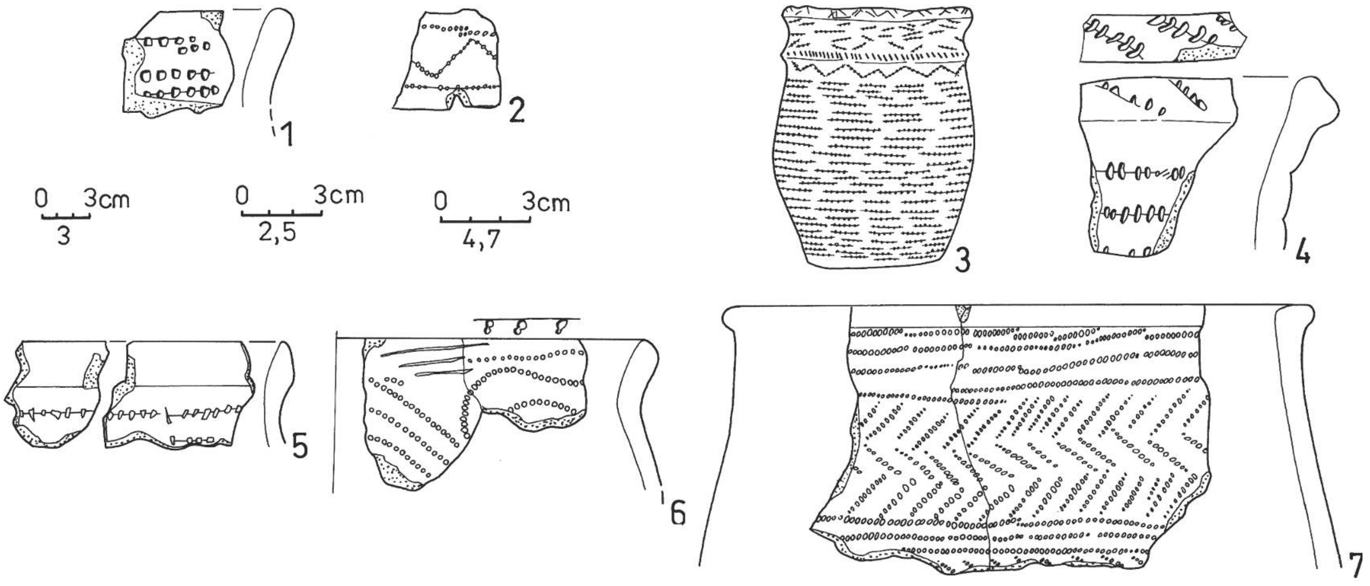

Fig. 2. Selected pottery of *barbed wire* decoration of the south-eastern Baltic zone. 1 - Glusk (Kryvaltsevich 1991, fig. 53: 3); 2 - Bukhlitsky Khutor (Kryvaltsevich 1998, fig. 4: 11); 3 - Lysaya Gara (Kryvaltsevich 1997, fig. 132: 15); 4 - Staryje Jurkovi 1 (Kryvaltsevich 1998, fig. 12: 4); 5 - Azyarnoye 1 (Kryvaltsevich 1998a, fig. 9: 5); 6 - Barzdis (Rimantiene / Ostrauskas 1998, Abb. 2: 13); 7 - Azyarnoye 1 (Kryvaltsevich 1998, fig. 8: 2)

which a constant exchange of cultural information took place (Czebreszuk 1996, 250; 2001, 139-140).

The presence of a separate Bell Beaker province to the west of the forest zone of Eastern Europe, has one raise the question of existence of the beakers' features also in this part of our continent.

A review of sources shows existence of different finds characterised by relevant cultural connections. These can be divided into three basic groups: (a) ornamentation and (to a lesser degree) pottery technology, (b) flint daggers and (c) metal artefacts. Future research will probably add new types of finds to the above list. Already, certain macromorphological features can be interpreted as signs of Bell Beakers' influence.

(a). The first group includes pottery decorated with characteristic (aa) zone type ornaments in the knurling technique and (ab) zone-metopic ornaments made in the knurling or incision technique. Furthermore, discussion of Eastern Europe requires separate treatment of (ac) the knurling ornamentation itself as well as relations between the local decorative varieties of the *barbed wire* type and the Bell Beakers tradition.

(aa). Zone type ornamentation of the Bell Beakers style (Fig. 1: 1, 3-6, Fig. 2:7) is known from the following sites: Abora I (Loze 1979, Table XXXIX: 4 and XLVI: l), Gnevchytsy (site researched by E. Kalechyts), Krasnaselski 5, Kryviny II (Zajkovski 1985) as well as Asaviets 2 (research by M. Charniauski).

(ab). The second group consists of vessels of zone-metopic ornamentation executed in the knurling or incision technique (Fig. 1: 2, 7; Fig. 3). We know it from Abora I (Loze 1979, Table XLVI: 2), Glinno 1 (research by E. Kalechyts) and Krasnaselski 5 sites (research by M. Charniauski). In the first instance it is a local transformation of Bell Beaker patterns; it is not a typical zone type ornament (it covers the whole area, there are no ornament-free horizontal partition zones); nevertheless, the idea of metopic decoration, which is evident in the analysed piece of pottery, is totally alien to the tradition of East European cultures.

A vase-like vessel of the Glinno site 1 (research by E. Kalechyts), which we know from experience (Fig. 3), has an outside-turned rim and acute-angled belly ridge, which reminds one of the classic "Iwno vase" of the Kujawy region (type 36.1 acc. to A. Kośko 1979: 44) and of the patterns of the classical phase of the Unetice culture (acute-angled belly ridge). The closest analogy comes from site Grudziądz-Mniszek 3 (Bokiniec / Marciniak 1987, Fig. 9:1).

All pieces of pottery, which we know from experience, are characterised by exquisite production technology. The fragment from Krasnaselski 5 (Fig. 1: 2) was made of clay with a substantial admixture of very fine and standardised broken stone and sand. It has a pink fracture and smoothed surface, i.e. it does not technologically differ from Bell Beaker artefacts of Western or Central Europe. One can even consider it in terms of imports.

(ac). From the technological point of view, the knurling ornamentation could either be executed with imprints of a multitooth comb, or toothed wheel (knurl)

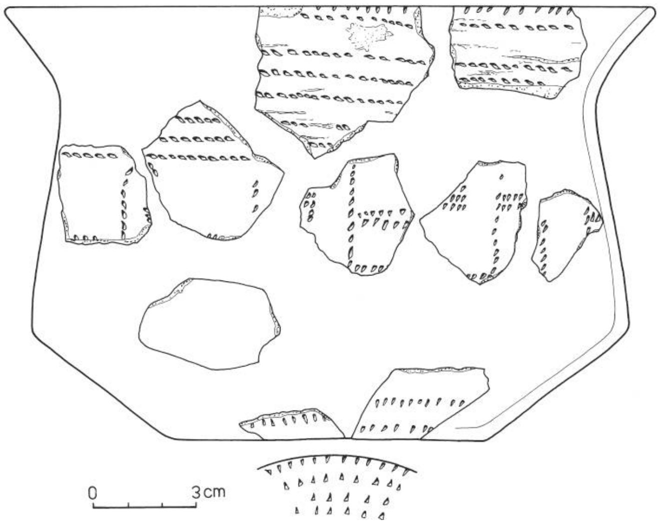

Fig. 3. The vessel from Glinno 1 (after M. Kryvaltsevich's archive).

held by the axis and rolled over wet clay. In the majority of cases both methods remain indistinguishable on particular artefacts. In the whole of Europe the knurling technique is genetically related to Bell Beakers (Salanova 2000). The situation gets more complex in the case of the forest zone of Eastern Europe, where such a decorative technique was used much earlier, as early as in the Neolithic Age (Telegin 1968). However, visible differences between both traditions can be observed as far as the structure of the ornament is concerned. With Bell Beakers these are always zone type and zone-metopic ornaments. In the Eastern European tradition the said technique is a constituent of more complex themes (also incorporating other decorative techniques). Furthermore, the ornaments do not exhibit such an orderly (standardised) form as those of the "beakers".

(ad). A separate taxonomic problem, one that can point to traces of Bell Beakers' influence in the forest zone of Eastern Europe, is the ornament, which in literature is most often labelled *barbed wire* (or *thread*) (Czebreszuk 2001, 164-165). There are a number of terms used for this type of ornamentation in the part of Europe under analysis; these are: *chetochnyj* (Russian) and its equivalent *ruzhantsovyj* (Belorussian) or *gusenichnyj* (Russian) and *vysenevy* (Belorussian) (Kryvaltsevich 1997, Appendix 1). In the western part of the European Lowland the *barbed wire* decoration has a very clearly defined genetic and chronological position: it is the final element of the sequence of stylistic changes within the local Bell Beakers (Struve 1955, 51-52; Lanting / Mook / Van Der Waals 1973, 50 and 54; Strahl 1990, 85). In the Polish and Eastern European Lowland this ornamentation is related to the so-called Trzciniec culture (Gardawski 1966, 535; Kryvaltsevich 1997; Rimantiene / Ostrauskas 1998) and has to be considered reasonably popular as it appears in several sites (Fig. 2): Abora 1 (Loze 1979, table XLV: 10, 11; L: 10), Barzdis (Rimantiene / Ostrauskas 1998, fig. 2: 13), Bukhlitsky Khutor 1 (Kryvaltsevich 1991, fig. 31: 4; 40: 1-3, 5, 7, 9, 14; 1998, fig. 4: 11, 12), Glusk (Kryvaltsevich 1991, fig. 53: 1, 3; 1998, fig. 12: 8), Kazan-Gorodok (Kryvaltsevich 1991, fig. 47: 2, 7), Kniazbor (Kryvaltsevich 1991, fig. 44: 16), Kutenka (Kryvaltsevich 1991, fig. 53: 6), Liplany 5 (Kryvaltsevich 1991, fig. 41: 14; 1998, fig. 2: 19), Lysaya Gara (Kryvaltsevich 1997, fig. 132: 11, 15; Kryvaltsevich 1998, fig. 13: 11, 15), Azyarnoye 1 (Kryvaltsevich 1991, fig. 50: 3, 5, 6; 1998, fig. 8: 1, 2; 9: 5, 10), Rusakovichi 2 (Kryvaltsevich 1997, fig. 132: 12; 1998, fig. 13: 12), Staryje Jurkovichi 1 (Kryvaltsevich 1991, fig. 54: 2-5; 1998, fig. 12: 2-5), Struga 1 (Kryvaltsevich 1991, fig. 46: 20, 23), Vikarovichi 1 (Kryvaltsevich 1991, fig. 45: 9,14), 2 (Kryvaltsevich 1991, fig. 46: 1, 6, 7, 10-13, 15) and 3 (Kryvaltsevich 1991, fig. 46: 17). Recently, general genetic relations between Bell Beakers and the so-called Trzciniec culture have been revealed (Czebreszuk 2001, 150-176; for more information see earlier literature), which lets one consider the discussed type of decoration a symptom of participation of the "forest" Eastern European communities in the late varieties of the Bell Beaker idea, specifically within its latest chronological variety already located at the turn of the Bell Beaker and „Trzciniec" cultures (Czebreszuk 2001).

(b). Another group of features that link the forest zone of Eastern Europe to Bell Beakers are flint daggers (Fig. 4 and 5), which are typologically and genetically related to the Jutland centre (a whole series of finds of Pojezierze Mazurskie region, cf. Libera 2001). Furthermore, the group contains the following finds: Abora 1 in Latvia (Loze 1979, Table III: 6), Barzdis (Rimantiene 1999, Fig. 17: 1), Dubichai (Grodno Museum collection; after M. Kryvaltsevich's archive), Katra (Rimantiene / Ostrauskas 1998, Abb. 6: 8, 9) – all in Lithuania and Antonova (Grodno Museum collection; after M. Kryvaltsevich's archive), Kryviny II (Charniauski 1997, fig. 116: 18), Leplonka (after M. Kryvaltsevich's archive) or Losha 1 (Kalechyts / Kryvaltsevich 1997, fig. 106: 1 - 3) – all in Belarus. The easternmost find of the type is the dagger of Mezha (Fig. 5) – probably an import from Jutland (Czebreszuk / Kryvaltsevich 2003).

(c). We would also like to draw attention to the potential role played by Bell Beakers in the origin of the first known metal artefacts from the analysed part of

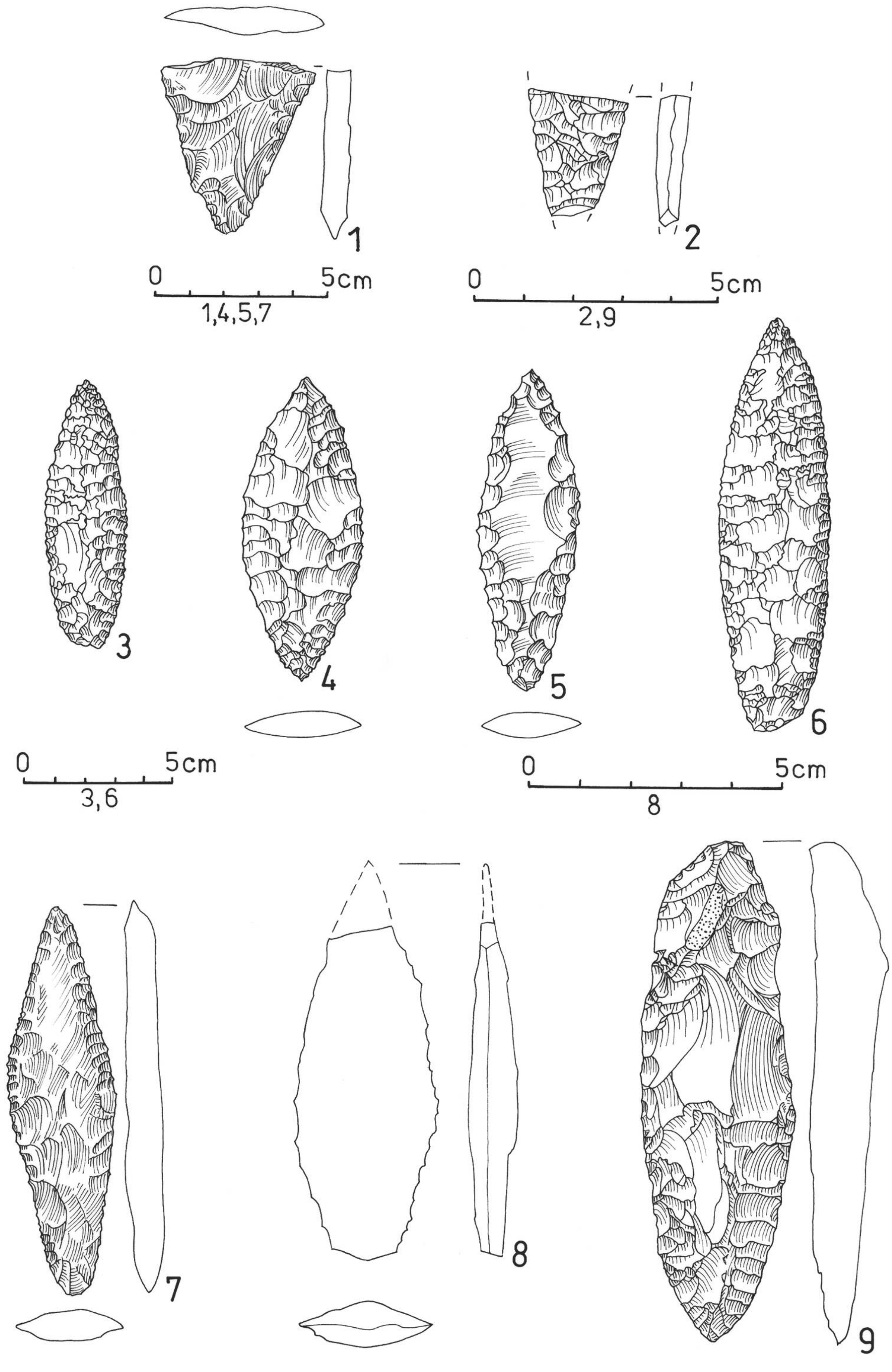
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Fig. 4. Selected flint daggers of the south-eastern Baltic zone. 1,7 - Abora I (Loze 1979, table III: 6, 9); 2 - Katra (Rimantiene / Ostrauskas 1998, Abb. 6: 9); 3, 6 - Losha l (Kalechyts / Kryvaltsevich 1997, fig. 106: l, 2); 4, 5 - Kryviny (Charniauski 1997, fig. 116: 18, 19); 8 - Dubichai (Grodno Museum collection, after M. Kryvaltsevich's archive); 9 - Barzdis (Rimantiene 1999, fig. 17: 1).

Europe, i.e. the gold lunula of Malbork (Sarnowska 1975, 29-31; Czebreszuk / Szmyt 2001a) and bronze (copper?) lunula from the burial place in Stratitsa (Fig. 6, Kryvaltsevich 2001) or the idea of the halberd (Czebreszuk 2001, 144-146; cf. example of a specific find from the Kaunas area – Sarnowska 1969, 86; for more information see earlier literature). Genetically speaking, both before mentioned types of artefacts are unequivocally associated with Bell Beakers of the Atlantic zone of Western Europe (O´Riordain 1936; Czebreszuk 2001, for more information see earlier literature). In Central Europe, halberds are believed to be genetically related to the Unetice culture too. From the perspective of north-eastern Europe, far away from Early Bronze centres, the co-occurrence of both traditions should come as no surprise.

It is quite symptomatic that in the majority of cases we know the zone type decoration in the incised and knurled form as well as flint dagger imports only from one archaeological culture, i.e. Northern-Belarusian one (Fig. 7). It is one of the most widely discussed taxonomic units in this part of Europe (Zajkovski 1985; Miklaev 1992; Charniauski 1997; Czebreszuk / Szmyt 2002). The “western” feature component is not particularly significant in this formation, and is only visible in pottery ornamentation (Kryviny) and flint processing (daggers imitating the Jutland patterns and imports? – Mezha); apart from Bell Beakers, it can also be associated with the patterns of the Corded Ware culture (Czebreszuk / Szmyt 2002). Based on a series of C^{14} datings, its chronology was determined as the end of the 3rd and beginning of the 2nd millennium B.C. (Czebreszuk / Szmyt 2002).

Determination of the appearance of Bell Beaker features in the forest zone of Eastern Europe in terms of time is a difficult task as we do not possess any direct data confirming appearance of Bell Beaker features in assemblages alongside finds characteristic of Eastern European formations or ones dated with the C^{14} method. However, based on the chronology of the analysed features to the west of the lower Vistula (Czebreszuk 2001, 140) and their presence in the forest zone of Eastern Europe – predominantly in sites of such formations as the so-called Trzciniec culture or Northern Belarus culture – we can propose a preliminary dating of ”beaker features” at the end of the 3rd and the first half of the 2nd millennium B.C. Another argument for the suggested dates may be «interpenetration» of Bell Beaker and Unetice culture traits in the studied part of Europe, which may be noticed in metal artefacts and in pottery (vessel from Glinno, Fig. 3). What is worth noting, is that the question of their decline, which is inextricably bound to the decline of both taxonomical units mentioned above, remains to a great degree an open one.

Bearing in mind the fact that sources from the discussed part of Europe have never been systematically studied against presence of Bell Beaker features, one can presume that the above list of finds is only a small fragment of a much wider whole. While analysing the quoted sources, a number of aspects must be taken into consideration.

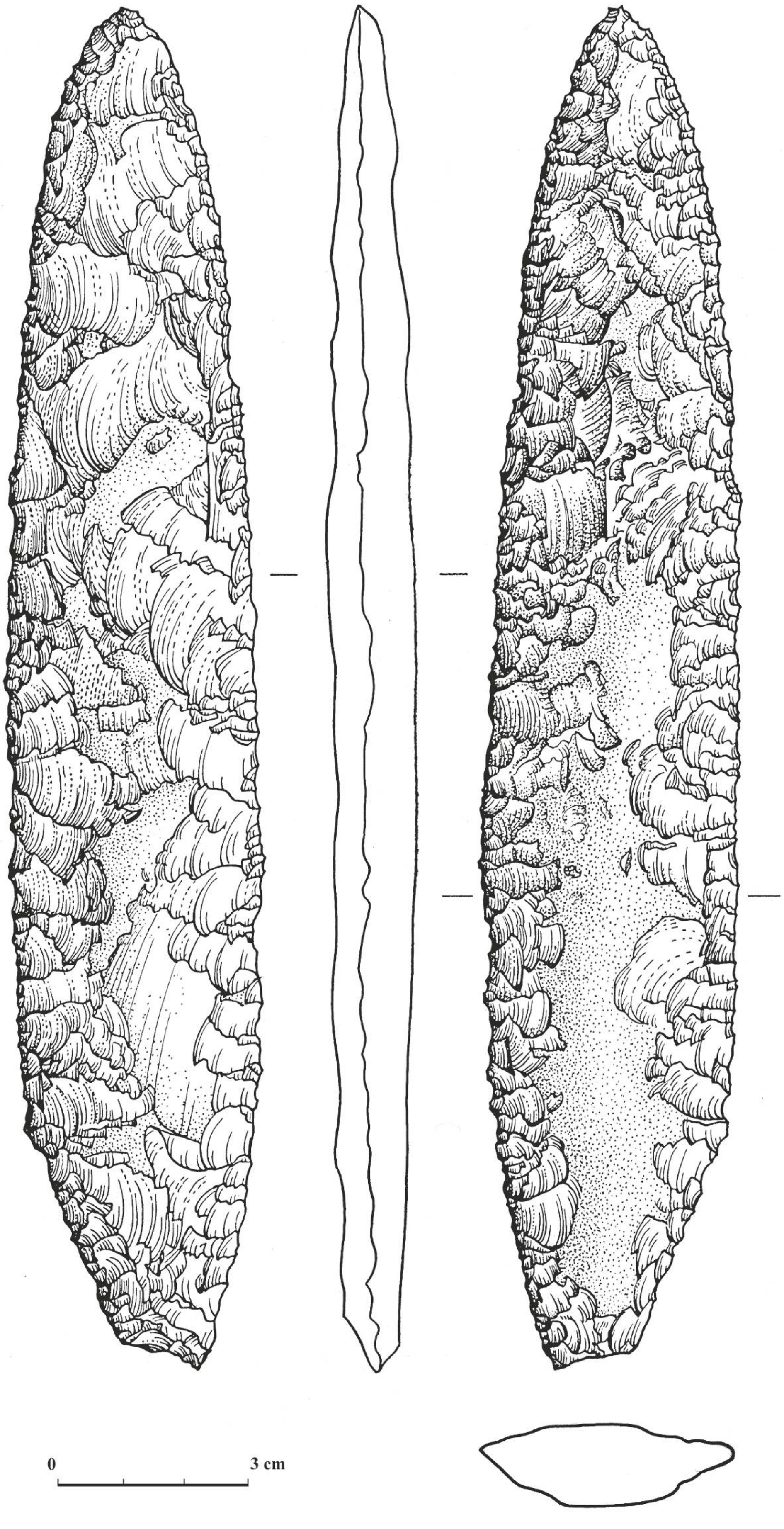
The first is the material diversity, which shows that Bell Beakers were present in the discussed part of Europe on different cultural levels of local societies.

The second is the high value of ”beaker” artefacts on the prestige scale. Richly decorated and technologically perfect pottery, flint daggers, and in particular first metal objects: *lunulae* or halberds, are artefacts very highly valued by the then societies. It points to the utilisation of the ”beaker idea” predominantly to articulate needs typical of communities of intricate social structure.

The third aspect concerns the geographical range of Bell Beaker features in the forest zone of Eastern Europe. They are known in the Baltic countries and in the Northern Belarus, i.e. in areas linked to deposits and processing of amber and – to a lesser degree - flint (Krasnaselski). It is perhaps not accidental that appearance of Bell Beaker features in these places coincides with the beginnings of the immense success of amber in vast areas (Czebreszuk / Makarowicz 1993; Czebreszuk 2001, 200-202; Czebreszuk 2003).

Another BB trait in north-eastern Europe is syncretism with other central European traditions. BB influences co-occur there with others, specifically with those of the Unetice culture. This fact may be interpreted as a sign of a marginal position of the studied part of Europe in the Early Bronze structure of our continent. Single traits of different traditions lived there their own lives (cf. the models of metonymic and metaphorical transformations of Leach 1976: 25-27), producing contents peculiar to those areas only, which is shown by artefacts atypical of the central European tradition (cf. for instance, the vessel of Glinno).

The present article should be considered the first signal, an indication that the question of Bell Beaker influence in the forest zone of Eastern Europe is not an empty one. Initiation of an international research programme based on a review of Eastern European



Fig, 5. The dagger from Mezha (Czebreszuk / Krywaltsewitsch 2003, Abb. 2).

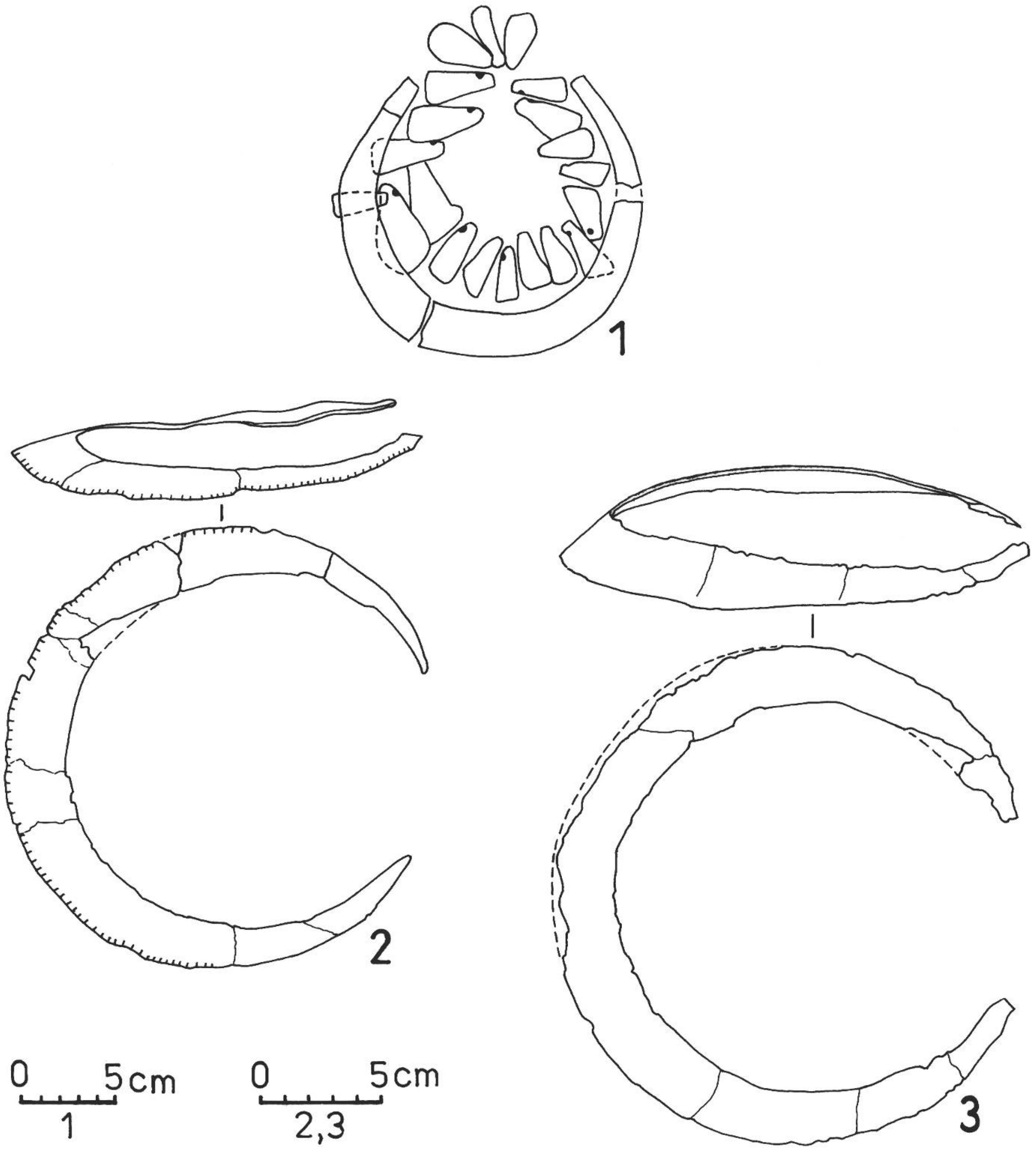


Fig. 6. Bronze *lunulae* of the south-eastern Baltic zone. 1-3 - Stratitsa (Kryvaltsevich 2001, Fig. 8 and 11).

sources against presence of Bell Beaker features is advisable in the future.

It is already today that a number of planes of the discussed tradition's potential meaningfulness becomes evident. The character of "beaker features" points to their importance as a medium by means of which social status and ranking were created. Association with deposits of amber and exquisite flint as well as intermediary role played in introduction into the metal culture, does, in turn, indicate the role played by Bell Beakers as a catalyst of technological progress and participation in long-range exchange. On the other hand, contribution of Bell Beaker features to the origin of North Belarusian culture is an indicator of a culture-stimulating role of the factor in Eastern Europe.

All the above evidence requires intense research that has to begin at the basic level: this of a review of the sources. It is, however, a task for many and for long.

Acknowledgements

The article was written within KBN grant no. 1 H01H 019 17.

While preparing the present paper several people granted us access to their previously unpublished materials or forthcoming articles. Hence, we wish to express our heartfelt gratitude to Elena Kalechyts (Minsk), Mikhail Charniauski (Minsk), Jarosław Sobieraj (Olsztyn) and Edward Zajkovski (Minsk).

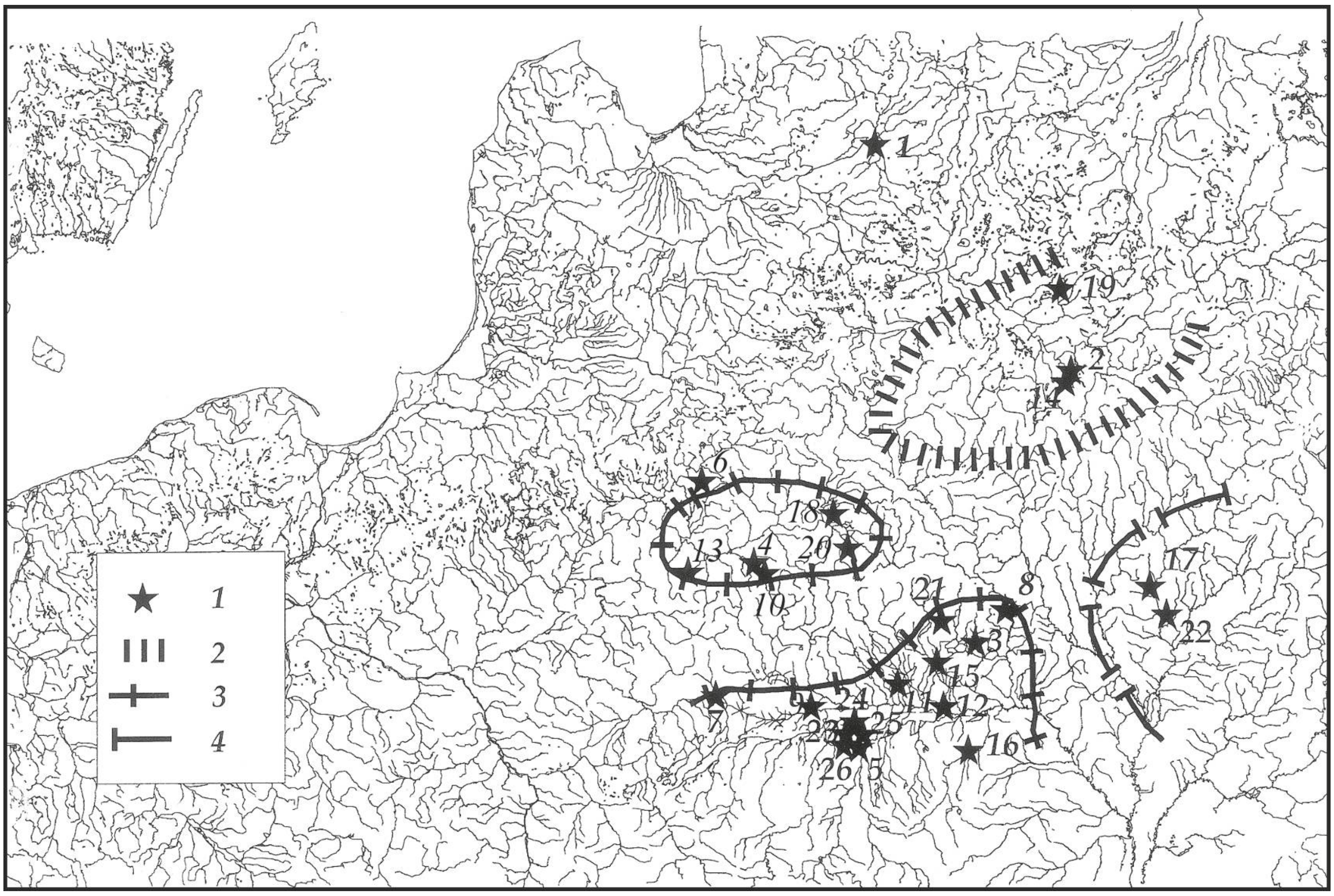


Fig. 7. Distribution of Bell Beaker features in the south-eastern Baltic zone. 1 – site; 2 – range of Northern Belorussian culture acc. to Charniauski 1997, fig. 100; 3 – settlement concentrations of the so-called Trzciniec culture acc. to Kryvaltsevich 1997a, fig. 101; 4 – range of the so-called Sośnica type acc. to Kryvaltsevich 1997a, fig. 101. List of sites containing Bell Beaker features as referred to in the article: 1 – Abora I; 2 – Asaviets 2; 3 – Azarnoye 1; 4 – Barzdis; 5 – Bukhlitsky Khutor 1; 6 – Dubichai; 7 – Glinno; 8 – Glusk; 9 – Gnevchytsy; 10 – Katra; 11 – Kazhan-Gorodok; 12 – Kniazbor; 13 – Krasnaselski 5; 14 – Kryviny II; 15 – Kutenko; 16 – Liplany 5; 17 – Losha 1; 18 – Lysaya Gara; 19 – Mezha; 20 – Rusakovichi 2; 21 – Staryje Jurkovichi 1; 22 – Stratitsa; 23 – Struga 1; 24 – Vikarovichi 1; 25 – Vikarovichi 2; 26 – Vikarovichi 3.

References

Bokiniec A.Z./ Marciniak M. 1987. Wstępne wyniki badań na wielokulturowym stanowisku Grudziądz-Mniszek 3, woj. toruńskie. In: T. Wiślański (ed.), *Neolit i początki epoki brązu na ziemi chełmińskiej*, 223–247. Toruń.

Charniauski M. 1997. Paunochnabelaruskaya kultura. In: *Archealogiya Belarusi*, 311–330. Minsk.

Czebreszuk J. 1996. *Społeczności Kujaw w początkach epoki brązu*. Poznań.

Czebreszuk J. 2000. Finds of archer's wristguards in the Baltic zone. In: S. Kadrow (ed.), *A Turning of Ages. Jubilee Book Dedicated to Professor Jan Machnik on His 70th Anniversary*, 157–172. Kraków.

Czebreszuk J. 2001. *Schyłek neolitu i początki epoki brązu w strefie południowo-zachodniobałtyckiej (III i początkach II tys. przed Chr.). Alternatywny model kultury*. Poznań.

Czebreszuk J. 2003. Amber on the Threshold of a World Career. In: C.W. Beck / I. Loze (eds.), *Amber in the Baltic*, 164–179. Riga.

Czebreszuk J. / Krywaltsewitsch M. 2003. Der Dolch aus Mesha, nördliches Weissrussland: Glockenbechereinflüsse in Osteuropa. *Archäologisches Korespondentzblatt*, 33, 1, 51–56.

Czebreszuk J. / Makarowicz P. 1993. The Problem of Amber Buttons with V-shaped Perforation in the Bell Beaker Culture. In: *Actes du XIIe Congres International des Sciences Prehistoriques et Protohistoriques*, II, 529–532. Bratislava.

Czebreszuk J. / Szmyt M. 2001. The III Millennium BC in Kujawy in the light of radiocarbon dating. In: J. Czebreszuk / J. Müller (eds.), *Die absolute Chronologie in Mitteleuropa, 3000 – 2000 v. Chr.*, 177–208. Poznań - Bamberg - Rahden/Westf.

Czebreszuk J. / Szmyt M. 2001a. The Bell Beaker influences on the North European Plain. In: F. Nicolis (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, 459–470. Trento.

Czebreszuk J./ Szmyt M. 2002. Chronology of Central-European Influences within the Western Part of the Forest Zone during the 3rd Millennium BC. In: V. Timofeev (ed.), *Chronology of the Neolithic period in Eastern Europa*, St-Petersburg, in print.

Gardawski A. 1966. Chronologia kultury trzcinieckiej. *Archeologia Polski* 10, 529–536.

Harrison R. J. 1980. *The Beaker Folk*, London.

Kalechyts E./ Kryvaltsevich M. 1997. Srednednaprovskaya kultura. In: *Archealogyia Belarusi*, 291–304. Minsk.

Kośko A. 1979. *Rozwój kulturowy społeczeństw Kujaw w okresach schyłkowego neolitu i wczesnej epoce brązu.* Poznań - Inowrocław.

Kryvaltsevich M. 1991. Bronzovyj vek centralnoy casti bielorusskogo Poles'ja, (unpublished PhD dissertation). Minsk.

Kryvaltsevich M. 1997. Z badań nad kultura trzciniecką na Polesiu białoruskim w dorzeczu Prypeci. *Folia Praehistorica Posnaniensia* 8, 69–97.

Kryvaltsevich M. 1997a. Tshcineckaya kultura. In: *Archealogyia Belarusi*, 330–340. Minsk.

Kryvaltsevich M. 1998. Identyfikacyya paudniobielariskaga „Tshcinca". In: A. Kośko / J. Czebreszuk (eds.), *Trzciniec – system kulturowy czy interkulturowy proces?*, 17–31. Poznań.

Kryvaltsevich M. 2001. To the question of place of the Middle Dnieper Culture in the system of Circum-Baltic Cultures. In: *Bronze Age Cultures in the Baltic Areas: 2300 - 500 BC.* Poznań, in print.

Lanting J.N./ Mook G.W./ Van Der Waals J.D. 1973. C^{14} Chronology and the Beaker Problem. *Helinium* 13, 38–58.

Lanting J.N./ Van Der Waals J.D. 1976. Beaker Culture Relations in the Lower Rhine Basin. In: Lanting J.N./ Van Der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 1–80. Bussum - Haarlem.

Leach E. 1989. *Culture and Communication*. Cambridge.

Libera J. 2001. *Krzemienne formy bifacjalne na terenach Polski i zachodniej Ukrainy (od środkowego neolitu do wczesnej epoki żelaza).* Lublin.

Liversage D. 1987. Mortens Sande 2 – A Single Grave Camp Site in Northwest Jutland. *Journal of Danish Archaeology* 6, 101–124.

Lomborg E. 1973. *Die Flintdolche Dänemarks. Studien über Chronologie und Kulturbeziehungen des südskandinavischen Spätneolithikums.* Kobenhavn.

Loze I. 1979. *Pozdniy neolit i rannaya bronza Lubanskoy Ravniny.* Riga.

Makarowicz P. 1998. *Rola społeczności kultury iwieńskiej w genezie trzcinieckiego kręgu kulturowego (2000 - 1600 BC).* Poznań.

Makarowicz P./ Czebreszuk J. 1995. Ze studiów nad tradycją pucharów dzwonowatych w zachodniej strefie Niżu Polski. *Folia Praehistorica Posnaniensia* 7, 99–133.

Miklajev A. 1992. Kamenniy-zhelezniy vek mezhdureche Zapadnoy Dviny i Lovati. Sankt Petersburg (unpublished PhD dissertation).

Müller J./ Van Willigen S. 2001. Bell Beakers in Europe – The C14 Evidence: Chronology and Ideology. In: F. Nicolis (ed.), *Bell Beakers Today. Pottery, people, culture, symbols in prehistoric Europe*, 59–80. Trento.

Nicolis F. (ed.) 2001. *Bell Beakers Today. Pottery, people, culture, symbols in prehistoric Europe.* Trento.

O'Riordain P. 1936. The Halbard in Bronze Age Europe, *Archaeologia* 86, 195–321.

Rimantiene R. 1999. Barzdžio Miško Gyvenvieté, *Lietuvos Archeologija* 16, 171–208.

Rimantiene R./ Ostrauskas T. 1998. Dem Trzciniec gleichzeitige Siedlungen in Litauen. In: A. Kośko / J. Czebreszuk (eds.), *Trzciniec: system kulturowy czy interkulturowy proces?*, 203–215. Poznań.

Salanova L. 2000. *La question du Campaniforme en France et dans les iles anglo-normandes. Productions, chronologie et roles d'un standard ceramique.* Paris.

Sarnowska W. 1969. *Kultura unietycka w Polsce.* Wrocław.

Sarnowska W. 1975. *Kultura unietycka w Polsce*, Vol. II. Wrocław.

Strahl E. 1990. *Das Endneolithikum im Elb-Weser-Dreieck.* Hannover.

Struve K.W. 1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen.* Neumünster.

Telegin D.J. 1968. *Dnepro-donecka kultura*. Kiev.

Vandkilde H. 1996. *From Stone to Bronze. The Metalwork of the Late Neolithic and Earliest Bronze Age in Denmark*. Aarhus.

Zajkovski E. 1985. Neolit i bronzovyj vek Belorusskogo Podvinja. Vilnius (unpublished PhD dissertation).

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

RECEPTION OF SOME BELL BEAKERS' CULTURAL PATTERNS BY CORDED WARE SOCIETIES IN SOUTHEASTERN BALTIC AREA

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At the beginning, it is necessary to explain that there are not any remains directly connected with the settlement of Bell Beakers on the territory mentioned here (Fig. 1). Neither typical graves, nor pottery or even such characteristic for this society artifacts, like wristgards or stone arrow-straighteners have not been found so far in territory situated north-east from low part of Vistula till the Neman River. However, some references to this culture circle can be noticed.

Apparently only corporate founds of amber artifacts can join the discussed zone with territories where remains of Bell Beakers appear. During the interstage of Neolithic and Bronze Age, the southeastern coasts of the Baltic Sea delivered just the raw material to produce amber jewellery, especially (such important for this discussion) buttons with a V-shaped perforation. Such amber as bone buttons, which were known previously from Narva Culture inventories, spread among Globular Amphorae Culture (GAC) society in the 3rd millennium BC (Szmyt 1999, 135; 176). Just thanks to the people of GAC, such buttons began to be very popular among societies of Bell Beakers and made a whole European career.

It is not known, why such simple form of jewellery was not produced in any other regions rich of amber, but the fact is that traces of its production have not been found on e.g. Jutland Peninsula or more generally – in the basin of the west Baltic and the North Sea (Czebreszuk 2001, 129-130).

In Kujawy region some transformations in GAC developing, which appeared in the IIIa phase of its evolution, are thought to be a consequence of contacts with north units of Bell Beakers (Szmyt 1996, 280-281). This process can be dated on 2450/2320-2150 BC, together with appearing of the first settlement tides of Bell Beakers' Maritime phase (Szmyt 1996, 250). Those interactions, which are usually discussed on exchange of the rites or ideas, only on little scale refer to features of vessels stylistic, which seems to regard both mentioned units (Kośko 1991, 31; Szmyt 1996, 250-251).

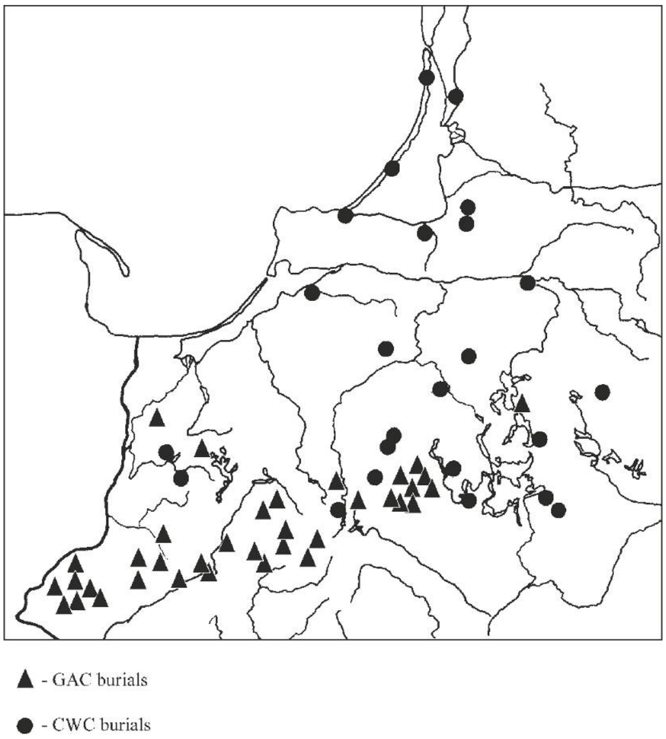

Fig. 1. Localization of GAC and CWC graves between low part of Vistula and Nieman River (after Kilian 1955, La Baume 1943, Nosek 1967, with completion of author).

Getting amber to produce jewellery, or sooner – ready-made articles, could be possible thanks to the most northern part of the central unit of GAC – which is known as Masurian group (Nosek 1967, 340 ff.). Despite its obvious Kujawian (or Chełmno-Kujawian) roots, the discussed group has also got some features, which differentiate it from its mother-land. Keeping to stay in megalithic funeral ceremony to the end of its existing, it prefers rather single – male graves or in scheme: man-child, man-woman (or women[1]) (see: La Baume 1943). All these facts indicate that north-east unit of GAC got into sphere of social differentiation a little earlier (or maybe more expressive) than the others. It seems to be confirmed by resignation of common graves and — in many cases — rich grave eguipment including large quantities of amber, of which some special are buttons with V-shaped perforation. In one of megalithic grave, excavated recently in Jajkowo (Brodnica district) (Sobieraj / Marciniak / Gutkowska 2002) such buttons were found together with an S-profiled vessel (Fig. 2). It is appearing – such unusual for GAC graves by type, size and proportions – can be treated like a kind of exterior impact. A ^{14}C dating for the grave is 3920 ±70 BP, 2490 – 2290 BC (Ki – 10 568).

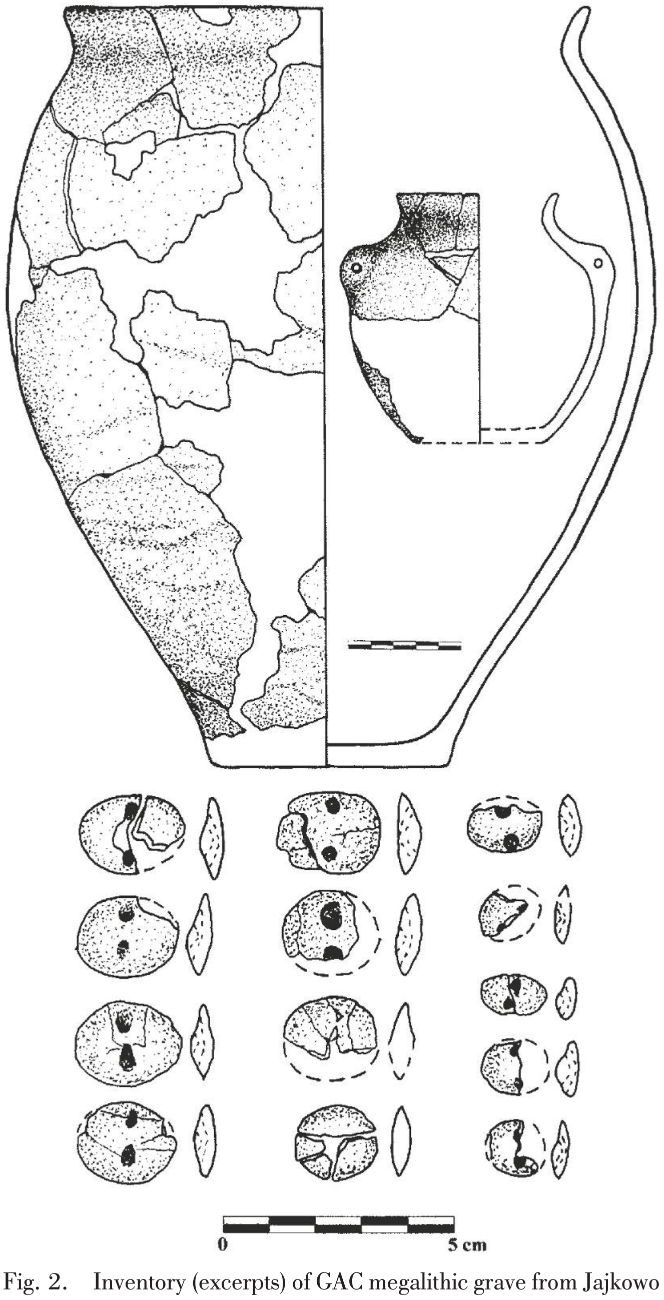

Fig. 2. Inventory (excerpts) of GAC megalithic grave from Jajkowo (after Sobieraj / Marciniak / Gutkowska 2002).

Although mentioned here examples seem to confirm intensive contacts between Bell Beakers and GAC in the southeastern Baltic zone, they do not finally explain the role, which was played by GAC in amber jewellery distribution.

To understand the right situation and nature of this culture unit on the discussed territory it is sufficient to use a map of grave's finds the GAC and Corded Ware Culture (CWC) – the society which seems to dominate (Sobieraj 2002) in mentioned region during the whole interstage of Neolithic and Bronze Age (Fig. 1). Though the state of investigation of the Neolithic settlement is still not satisfactory enough, the arrangement of GAC and CWC finds on this territory generally presents cultural relations of that time. As well as in the above example, the co-existence of both units on the mentioned area seems to be impossible.

The places, where amber was excavated (the south-east coast of the Baltic Sea) stayed obviously out of the dense settlement of GAC. This fact is confirmed also by the results of archaeological excavations of the amber workshops, which existed on this area. According to any evidence, it is necessary to combine them with Rzucewo Culture (Mazurowski 1987, 103-108).

Though the roots and nature of this unit is not clear enough, they certainly refer to Corded Ware societies, in spite of the theory about its syncretic origin – formed in participation of Funnel Beaker Culture, GAC, CWC, late Narva and Nieman Cultures. Either appearing vessels and tools with "old-corded" features or lacking graves different from those mentioned earlier, convince "corded" nature of Rzucewo Culture (Machnik 1997).

Even if artefacts of this unit, known from the Eastbalthic gulfs and bars, are a little specific, their nature seems to be the result of the individual character of relatively permanent settlement (Tetzlaff 1970, 358) but not an effect of any syncretism. Although intensive contacts with amber consumers from GAC circle are important for the nature of Rzucewo Culture, the character of possible influences should be described rather as an interrupted occurrence, which may existed after so-called "A-horizon" of CWC.

In the light of ^{14}C data (Szmyt 1999, 272-273; 276), the workshops of Rzucewo (or just Corded Ware) Culture were working both before appearing of GAC and after its disappearing. Many facts indicate that

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[1] In Wierzbowo (Nidzica district) it was found a megalithic grave in which an adult male was buried together with two young women, that had theirs skulls perforated (Knieß 1938).

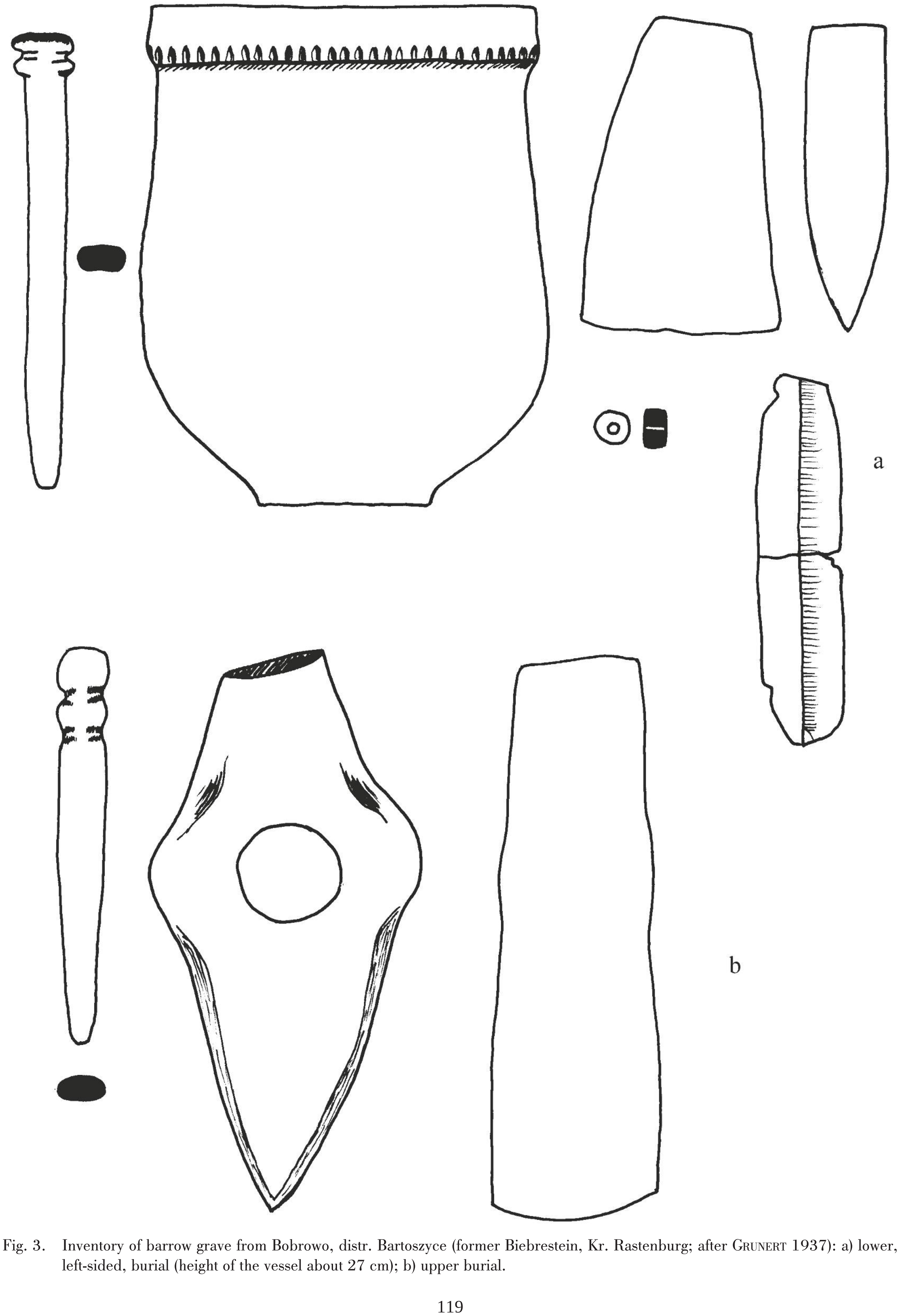

Fig. 3. Inventory of barrow grave from Bobrowo, distr. Bartoszyce (former Biebrestein, Kr. Rastenburg; after GRUNERT 1937): a) lower, left-sided, burial (height of the vessel about 27 cm); b) upper burial.

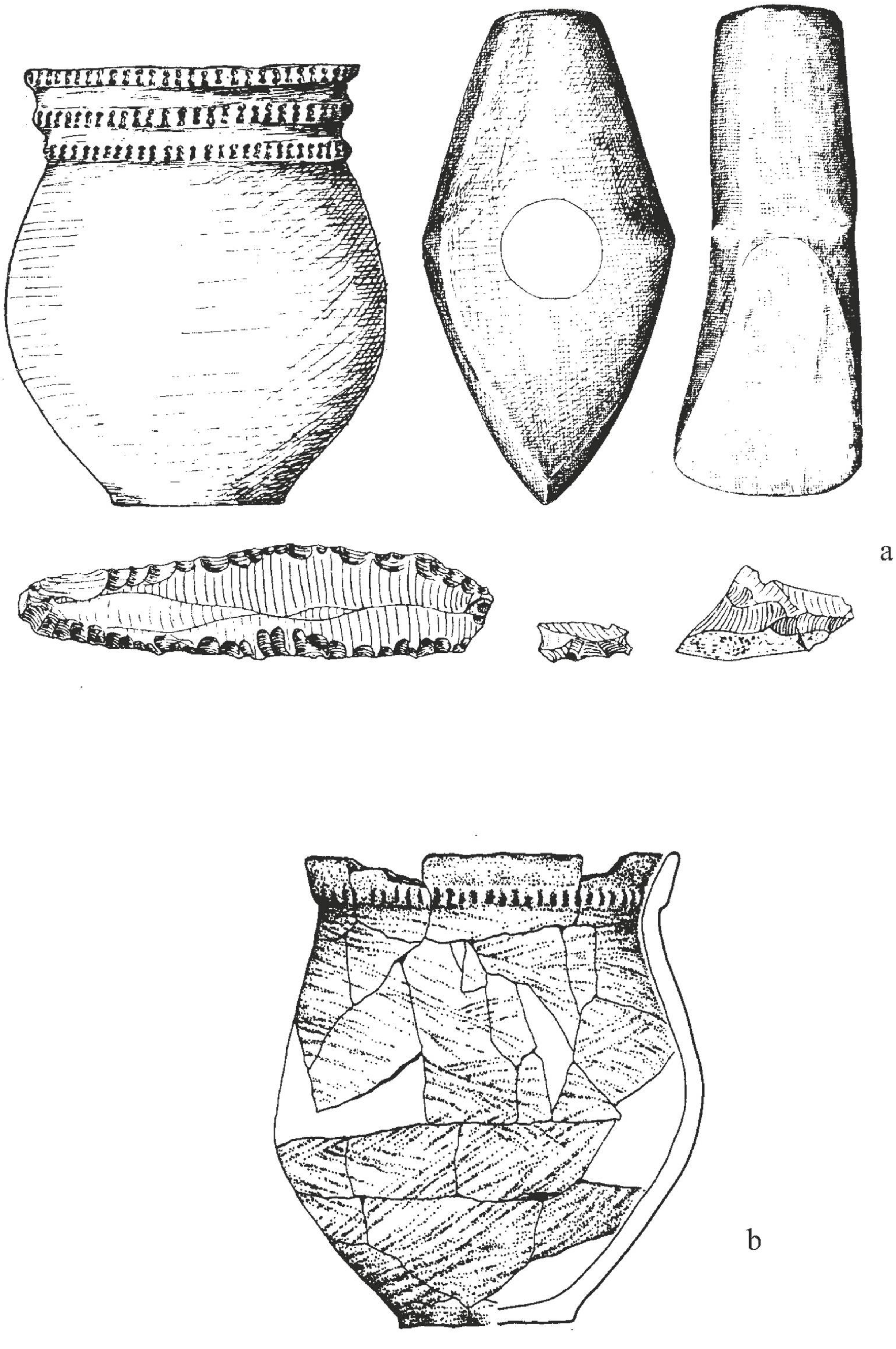

Fig. 4. Some CWC beakers (after KILIAN 1955 and unpublished materials of M. Rybicka): a) inventory of a flat grave form Koczek, Olsztyn district (form. Waldersee, Kr. Allenstein; height of the vessel about 25 cm); b) vessel form destroyed barrow grave of Równina Dolna (height about 28 cm).

those workshops had still been delivering amber jewellery (or material to its production) during the early periods of Bronze Age. It was proved by lots of metal artifacts found in the discussed region, which came from Únětice Culture range (Dąbrowski 1968, 93-107), and for which it is impossible to find any other users than CWC people (Sobieraj 2002).

Although in northeast range of CWC there are not any close connections with Bell Beakers like e.g. in northern Germany or Denmark, where great standardization is visible (Czebreszuk 2001, 134-139), a lot of facts indicate adapting some of their ideas. Such influence doesn't seem to be strong, considering very conservative character of this "last stronghold" of CWC (despite existing obvious evidences, proves persisting of its societies during the Bronze Age, it is impossible to find such artifacts like, for example, potted-beakers on the discussed territory; see: Kilian 1955). But although conservative features seem to dominate, there is some clear infuence of Bell Beakers.

It is obvious that foreign features in funeral customs can be visible in childrens' graves which are known from Dudka in Giżycko district (Gumiński 1997, 98) – flat and equipped only in single buttons made of clay and limestone, and from Zaliwnoje, district Czerniachowsk (former Erdmannsruh, Kr. Insterburg) – with traces of ochre, two bone pins and flint tool (Grunert 1937, 7-17). Their bodies were putting with the heads directed to the south. Such custom does not certainly exist in any other kinds of bury, appearing on the discussed territory.

Changes in funeral custom, which can be connected with the influence of Bell Beakers, are also noticed in the most traditional kinds of graves – the barrows, in which male bodies were putting on the left sides (Kilian 1955, 64). That was quite opposite to the strict rules, appearing on the whole CWC area (Häusler 1992, 344). Those kinds of graves — in the horizon when bone pins with profiled ball-heads started to appear — consist such form of vessels which do not exist elsewhere in such context (Fig. 3).

They are wide–opened pots (or big beakers) with borders or battens decorated by nail's imprints. Their appearing is typical for finds, which come from settlements and which can be dated back to older phases of CWC in the whole its area (Kurzawa 2001, 155-165), but in funeral customs those vessels (of such kind and size – Fig. 4[2]) are characteristic just for discussed unit.

The origin of this tradition might came from the period when *Riesenbecher* stylistic, specific for Bell Beakers and units which appeared under their influence, became general (Czebreszuk 2001, 154-164).

Although the territory still occupated by CWC society does not appear in any "western" cultural associations and seems to play only delivery role in exchange of valuable objects, diffusion of some ideas gives evidence of quite intensive contacts between Bell Beakers and CWC. Other signs, that prove such a fact, are bone belt fasteners (Fig. 5) from grave of Mochowoje (form. Wiskiauten) on Samland Peninsula, the first CWC barrow excavated in former East Prussia, in summer of 1873 (Heydeck 1893). Another problem, which should be explained in this context, concerns the appearance of flint daggers (including type I of Lomborg) found in casual relationships on the mentioned territory (Bargieł / Libera 2002).

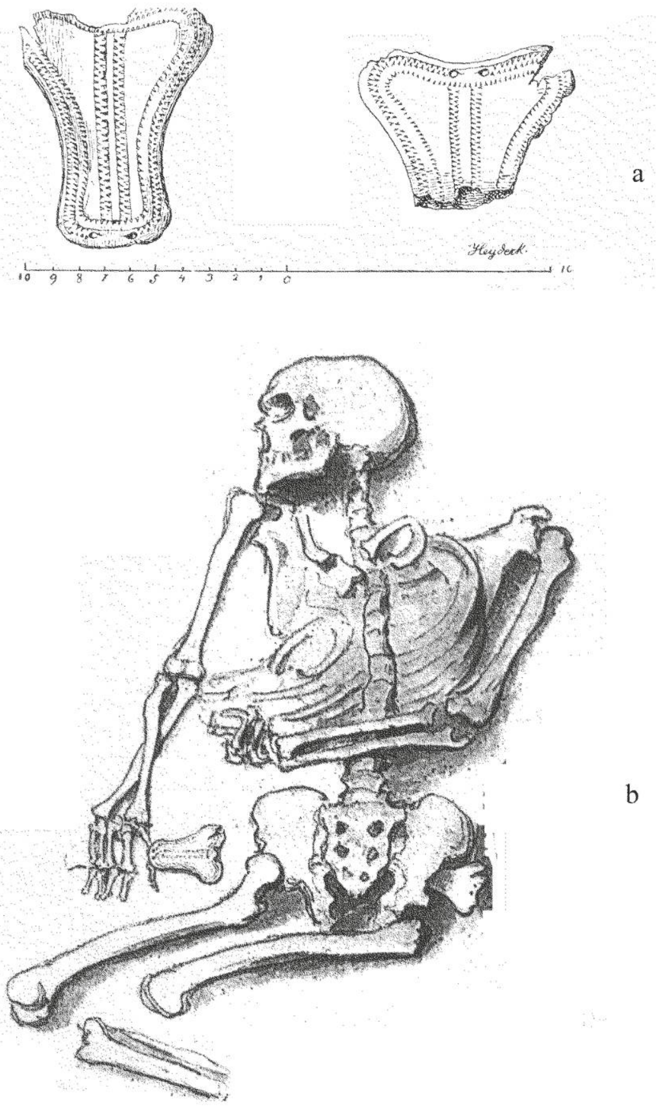

Fig. 5. Inventory of the lowest grave of barrow from Mochowoje (after Heydeck 1893): a) two bone belt fasteners; b) the view of skeleton with localization of the fasteners.

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[2] Author would like to thank Dr. Małgorzata Rybicka for making accessible her unpublished materials from excavations of J. Wysocki in Równina Dolna, distr. Kętrzyn.

References

BARGIEŁ B. / LIBERA J. 2002. Problem przynależności chronologiczno-kulturowej bifacjalnych płoszczy i noży sierpowatych na obszarze Polski północno-wschodniej. In: HOFFMANN M. / SOBIERAJ J. (eds.), *Człowiek i środowisko w epoce brązu i wczesnej epoce żelaza u południowo-wschodnich pobrzeży Bałtyku*. Olsztyn, in print.

CZEBRESZUK J. 2001. *Schyłek neolitu i początki epoki brązu w strefie południowo-zachodniobałtyckiej*. Poznań.

DĄBROWSKI J. 1968. *Zabytki metalowe epoki brązu między dolną Wisłą a Niemnem*. Wrocław-Warszawa-Kraków.

GRUNERT W. 1937. Nadrauer Grabungen. *Zeitschrift des Altertumsgeselschaft Insterburg* 21, 7-23.

GUMIŃSKI W. 1997. Corded Ware at the Dudka peat-bog site, NE Poland. A case of migration or local development. In: SIEMEN P (ed.), *Early Corded Ware Culture. The A-Horizon – fiction or fact?* Arkaeologiske Rapporter 2, 93-103. Esbjerg.

HÄUSLER A. 1992. Zum Verhältnis von Ockergrabkultur und Schnurkeramik. In: BUCHVALDEK M. / STRAHM C. (eds.), *Die kontinentaleuropäischen Gruppen der Kultur mit Schnurkeramik*, Praehistorica 19, 341-348. Praha.

HEYDECK J. 1893. Zwei Steinzeitskelette (liegende Hocker) in dem Prussia-Museums. *Sitzungsberichte der Altertumsgesellschaft Prussia* 18, 46-60. Königsberg.

KILIAN L.1955. *Haffküstenkultur und Ursprung der Balten*. Bonn.

KNIEß G. 1938. Das steinzeitliche Grab von Wiesenfeld, Kr. Neidenburg. *Alt-Preußen* 3(3), 65-67.

KOŚKO A. 1991. Specyfika rozwoju kulturowego społeczeństw Niżu Polskiego w dobie schyłkowego neolitu i wczesnej epoki brązu. Zarys problematyki. In: GURBA J. (ed.), *Schyłek neolitu i wczesna epoka brązu w Polsce środkowowschodniej*, 23-37. Lublin.

KURZAWA J. 2001. *Zagadnienie najwcześniejszych faz kultury ceramiki sznurowej na nizinie wielkopolsko-kujawskiej*. Poznań.

LA BAUME W. 1943. Die jungsteinzeitliche Kugelamphoren-Kultur in Ost- und Westpreußen. *Sitzungsberichte der Altertumsgesellschaft Prussia* 35, 13-80.

MACHNIK J. 1997. „Rzucewo Culture" and the Early Horizon of the Corded Ware. In: KRÓL D. (ed.), *The Built Environment of Coast Areas During the Stone Age*, 128-134. Gdańsk.

MAZUROWSKI R. F. 1987. Badania żuławskiego regionu bursztyniarskiego ludności kultury rzucewskiej. Niedźwiedziówka, stanow. 1–3. In: PAWŁOWSKI A. (ed.), Badania archeologiczne w woj. elbląskim w latach 1980-83, 79-121. Malbork.

NOSEK S. 1967. *Kultura amfor kulistych*. Wrocław-Warszawa-Kraków.

SOBIERAJ J. 2002. Kultura ceramiki sznurowej a początki epoki brązu pomiędzy Dolną Wisłą i Niemnem. In: HOFFMANN M. / SOBIERAJ J. (eds.), *Człowiek i środowisko w epoce brązu i wczesnej epoce żelaza u południowo-wschodnich pobrzeży Bałtyku*. Olsztyn, in print.

SOBIERAJ J. / MARCINIAK M. / GUTKOWSKA A. 2002. Grobowiec megalityczny kultury amfor kulistych z Jajkowa, stan. 45, pow. Brodnica. In: FUDZIŃSKI M. (ed.), *XIII Sesja Pomorzoznawcza*, vol. 1. Gdańsk, in print.

SZMYT M. 1996. *Społeczności kultury amfor kulistych na Kujawach*. Poznań.

SZMYT M. 1999. *Between West nad East. People of Globular Amphora Culture in Eastern Europe: 2950-2350 BC.* Baltic-Pontic Studies 8. Poznań.

TETZLAFF W. 1970. The Rzucewo Culture. In: WIŚLAŃSKI T. (ed.), *The Neolitic in Poland*, 356-365. Wrocław-Warszawa-Kraków.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

THE LUBĀNS, NORTH BELARUSIAN AND ŠAGARA CULTURES AS AN EASTERN PHENOMENON OF AN ENEOLITHIC CULTURAL UNIT

Ilze Loze (Riga, Latvia)

The Lubāns, North Belarusian and Šagara Cultures have made their appearance gradually on the archaeological map of Eastern Europe, between the 1960s and 1980s, in connection with discoveries in the Lake Lubāns Wetlands, the upper course of the Daugava Basin and Lakeland Mešera. This area includes major river basins – the Daugava, Klazma and Oka – and lies alongside these major river arteries (Fig. 1).

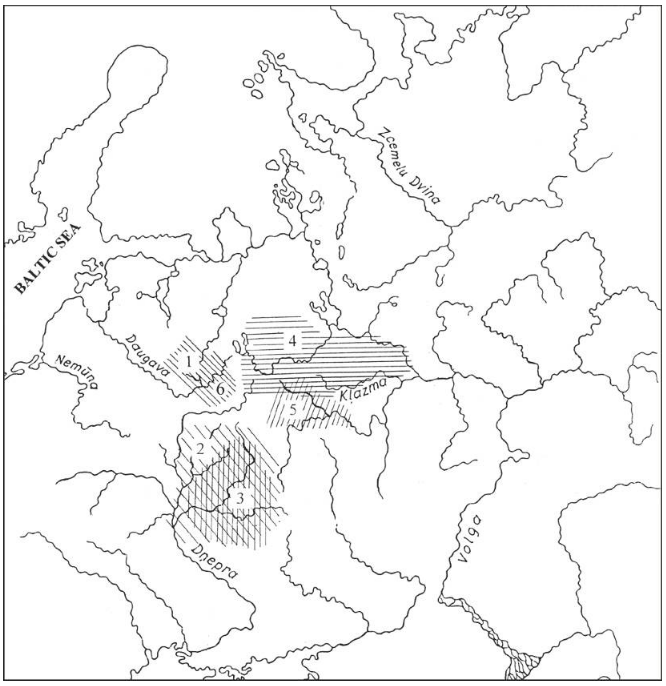

Fig. 1. Eneolithic and Bronze Age cultures of the East European Forest Zone: 1 – Lubāns; 2 – Middle Dnieper; 3 – Maryanovo; 4 – Fatyanovo; 5 – Šagara; 6 – North Belarusian.

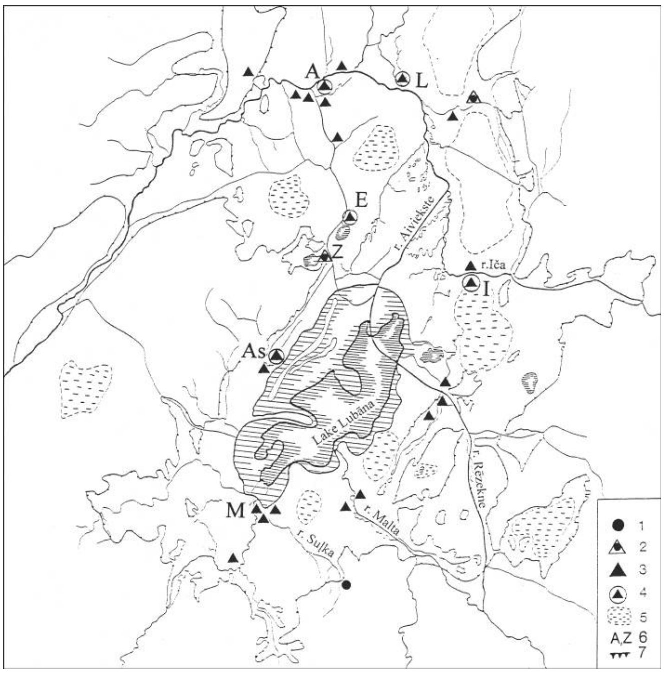

Fig. 2. Mesolithic, Neolithic and Eneolithic sites in the Lake Lubāns Depression. A – Abora I, As – Asne I, E – Eiņi; I – Iča; L – Lagaža; M – Malmutas grīva.

The Lubāns Culture

The first to be recognised was the Lubāns Culture, back in the mid-1960s, when archaeological excavation was conducted in a zone of large-scale land improvement and construction work around Lake Lubāns, leading to the discovery of more than 20 new wetland Neolithic settlement sites (Fig. 2). At one of these newly discovered sites – Lagaža – two superimposed cultural layers were recorded, with a hitherto unknown pottery ware tempered with crushed rock, which occurred there together with Early Textile-Impressed Ware, i.e. organic-tempered Textile-Impressed Ware. This site lies at the confluence of two watercourses, one of which is the so-called Posms, a former channel of the Balupe, which is a tributary of the Aiviekste (the only river outlet from Lake Lubāns, which connects it with the Daugava), the other being a stream outflowing from Lagaža-Šnitkas Bog. Two hundred metres downstream from this confluence, in the southern part of the archaeological site, their joint river course meets the Aivieksti (Fig. 3).

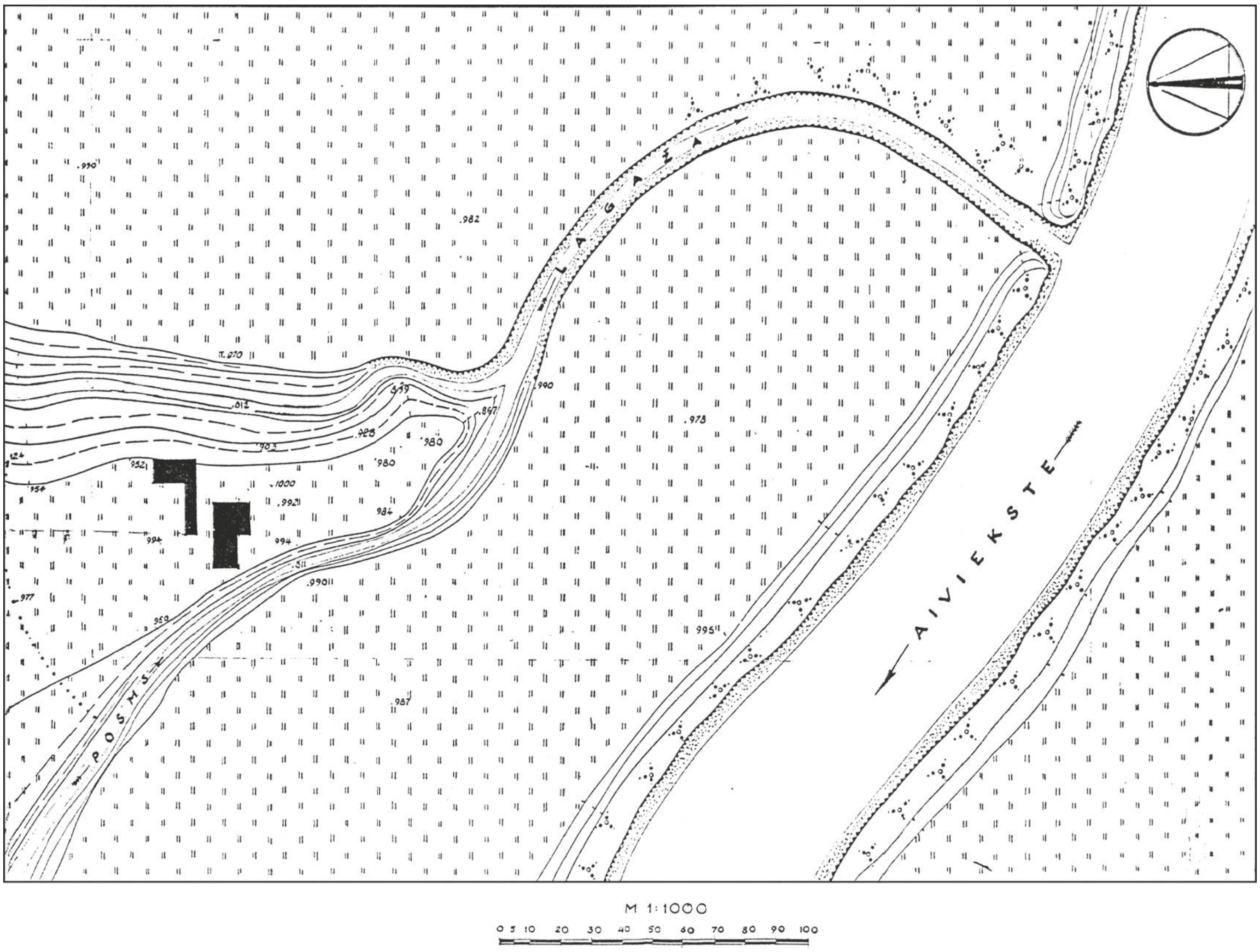

Fig. 3. Topographic map of the Lagaža site. Surveyed by Andris Caune.

A geomorphological study by Guntis Eberhards has shown that the Lagaža and Posms are two former channels of the Bolupe Stream, of different ages (Fig. 4). He considers that abandonment of the older streambeds along the lower course of the Bolupe and the gradual shift of the whole river network to the west is the result of intensive growth of the adjacent large raised bog, called Lagaža-Šnitkas Bog, both in height and laterally over the past 3000–4000 years.

A section across the settlement site by G. Eberhards shows grey loam with an admixture of gravel from the last glaciation at a depth of 2–2.5 m. Core data show that its uneven surface is overlain by limnoglacial clays (LGL Q III), silts and very fine grained sand, with a thickness of 1–1.5 m. These deposits are overlain by a thin (0.12–0.35 m) layer of yellow clay, which grades into loam and sandy loam in the higher part of the plain. The final layer in the series of lacustrine deposits is gyttja, decreasing in thickness away from the confluence of the Lagaža and Posms (0.40–0.45 m) and giving way to sandy grass-wood peat in the slightly higher western part.

The section by G. Eberhards presented here and his conclusions show that the upper part consists of alluvial sand, grey loam and sandy silt (0.4–0.8 m), accumulated in the course of spring floods over the past 2800–2000 years.

G. Eberhards considers that habitation began at the Lagaža site after the shallow lake existing here in the first half of the Sub-Boreal had dried up. The first inhabitants of the site, the makers of Textile-Impressed Ware and smooth-walled pottery, constructed post-built structures, the lower parts of which were well preserved in the grass-wood peat.

The cultural layers of the Lagaža site differ in lithology (Fig. 4). The upper layer consists of sandy, peaty silt with plant remains (0.15 m thick), while the lower layer has formed in sandy-silty wood/grass peat (0.25 m thick). The latter showed excellent preservation of building remains. Archaeological excavation over an area of 377 m^2 revealed two connected structures, with at least two phases of building (Fig. 5). The area of these post-built structures had been at least 40 m^2. They were oriented at an angle to one

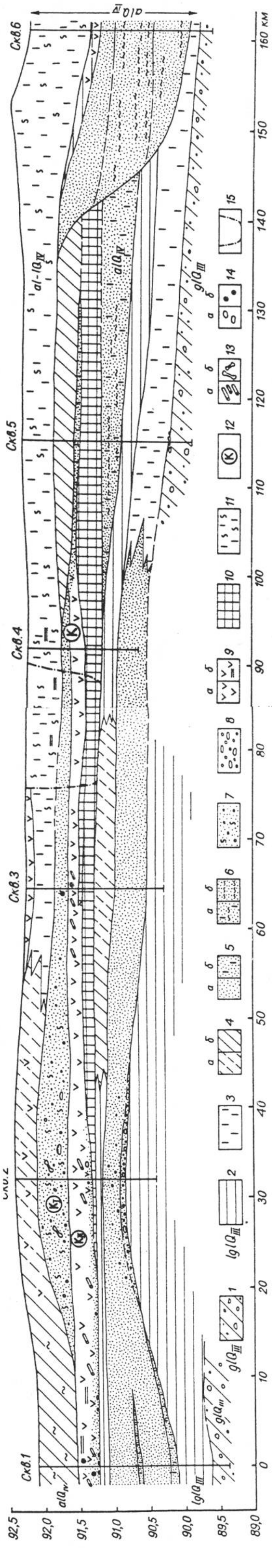

Fig. 4. Geomorphological section of the Lagaža site (after G. Eberhards): 1 – grey loam till of the last glaciation; 2 – yellow-brown limnoglacial clay; 3 – light grey silt; 4a – washed up material; 4b – lacustrine and alluvial loam; 5a – very fine and fine sand; 5b – silty sand; 6a – dusty sand; 6b – grey sand; 7 – various grades of sand with admixed organics; 8 – gravel with pebbles; 9a – grass peat; 9b – clayey grass peat; 10 – gyttja; 11 – grey silt with lacustrine-alluvial organic remains; 12 – cultural layer; 13a – building remains; 13b – palaeoosteological material; 14a – hearth stones; 14b – wood charcoal; 15 – archaeological excavation area.

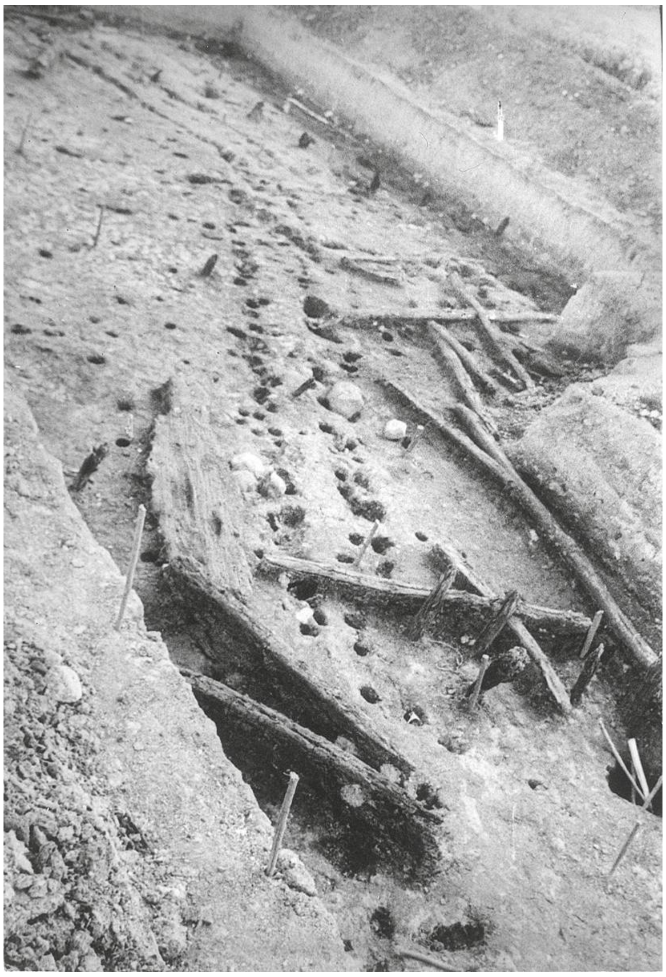

Fig. 5. View of uncovered structural remains at Lagaža (Excavation Areas B, C, D and E).

another with a joint entrance from the north. The western building had two rooms, divided by a partition wall. It was in this building that a 2.65 m long log was found, from the structure of the building – the floor or the ceiling, as well as some crosspieces and split planks. Heavy timbers of deciduous wood, of more than 0.40 m diameter, had supported the roof. The line of the walls is marked by post and stake holes.

The excellent state of preservation of the wood permitted radiocarbon dating.

Table 1. Radiocarbon dates from Lagaža.

Lab. code	Material	^{14}C	Cal. BC
TA - 396	horizontally lying log	3640±70	2032
TA - 382	horizontally lying log	3640±70	2032
TA - 749	horizontally lying stake	3685±70	2127, 2077, 2043
LE - 868	wood	3240±70	1519

The cultural layer with Lubāns Ware, of interest here, had formed in the grey loam and silty sand in the eastern part of the site, where the greatest concentration of such sherds was found. This means that the users of this pottery, who possibly also produced the pottery here and left behind them hundreds of broken vessels, had settled in this part, rather than in the central and western parts of the site.

In the central and western part of the site, in the grass-wood peat layer with a considerable admixture of woodchips, where the remains of post-built structures were found, the above-mentioned organic tempered pottery predominated – early Textile-Impressed Ware and smooth-walled pottery with sparse decorative designs of wrapped cord and comb impressions, pits and fine incisions.

The makers of Lubāns Ware built their dwellings in the area closest to the Lagaža Stream, occupying an area not exceeding 3200 m^2. This area has been calculated, based on the data on the distribution of this pottery over the site. It seems that this area was about 65 m long in a north-south direction and 40 or 50 m wide.

This is indicated by attempts to determine the northern boundary of the Lagaža site. Lubāns Ware was still present in a trial trench 48 m north of the central axis of the site, at the centre of which is the north-facing section of Area B, but at a distance of 58 m the grey loam or silty sand layer with Lubāns Ware was no longer present.

Hearths were found in the structures in this part of the site. Among the charcoal of the fill of the hearth in the first structure a fragment of a crucible for casting bronze was found, with bronze droplets on its interior wall. Another 11 crucible fragments were found nearby, some of which belonged to different crucibles.

Another site in the Lake Lubāns Depression that became the subject of attention during research in the mid-1960s, and particularly in the 1970s, was the settlement of Abora I (Fig. 2). This site is on the bank of a former channel of the Aiviekste, now known as the Abora Stream.

Lubāns Ware was recovered from the upper layers in the central part of this site. The cultural layer had formed in intensively black 0.60 m thick clay loam, above an artificial embankment. The site also includes the slope of the bank, and in this part there is a cultural layer formed in peat, which produced Late Neolithic pottery, including Corded Ware. In the course of excavation at the Abora I site, uncovering an area of 1311 m^2, an assemblage of Lubāns Ware was obtained that is half the size of that from Lagaža (Table 2).

At the settlement site of Asne I, on a raised area of mineral soil very close to Lake Lubāns, and at the Middle Neolithic site of Zvidze, on the edge of a terminal moraine, this pottery occurs only in the uppermost part of the cultural layer. On the other hand, at the mouth of the River Malmuta, the cultural layer of a multi-layer site washed out in antiquity and recently reworked, produced pottery of which Lubāns Ware makes up a small proportion.

Table 2. Number of sherds of Lubāns Ware on Neolithic sites.

No.	Site	Lubāns Ware	Corded Ware	Organic-temp--ered pottery
1	Abora I	1 112	197	16 697
2	Asne I	470	48	980
3	Eiņi	44	5	2 514
4	Ička	89	40	1 641
5	Lagaža	2678	7	14 994
6	Malmutas grīva	135	3	7 046
	Total	4 528	300	43 872

The morphology of Lubāns Ware vessels

The degree of fragmentation of Lubāns Ware at the sites is such as to cause problems in determining vessel morphology. Nevertheless, an attempt has been made, with the involvement of pottery and experimental archaeology specialists, to determine the main vessel forms, which is not unimportant for establishing the origin of this culture.

Six main vessel forms are distinguished: 1) beakers, 2) S- shaped beakers, 3) large bowls with curved sides, 4) bowls with curved rims, 5) straight-sided bowls, 6) large pots with curved rims (Fig. 6:A–F).

Beakers are of four types, with a neck diameter of 12–25 cm: a) with a gradually flared lip, b) with a rounded lip, c) with a thickened, everted lip and d) with a particularly wide opening of the neck (Fig. 6:A). The S-shaped beakers have a pronounced everted neck and curved body (Fig. 6:B). The large bowls with an elaborated rim (20–38 cm in diameter) include three types: a) with a pronounced, broadened and everted lip and noticeable rounding of the sides, b) with a straightened section of the lip and pronounced rounding of the sides, c) with a sharp-angled flared lip (Fig. 6:C). The bowls with a curved rim differ in the

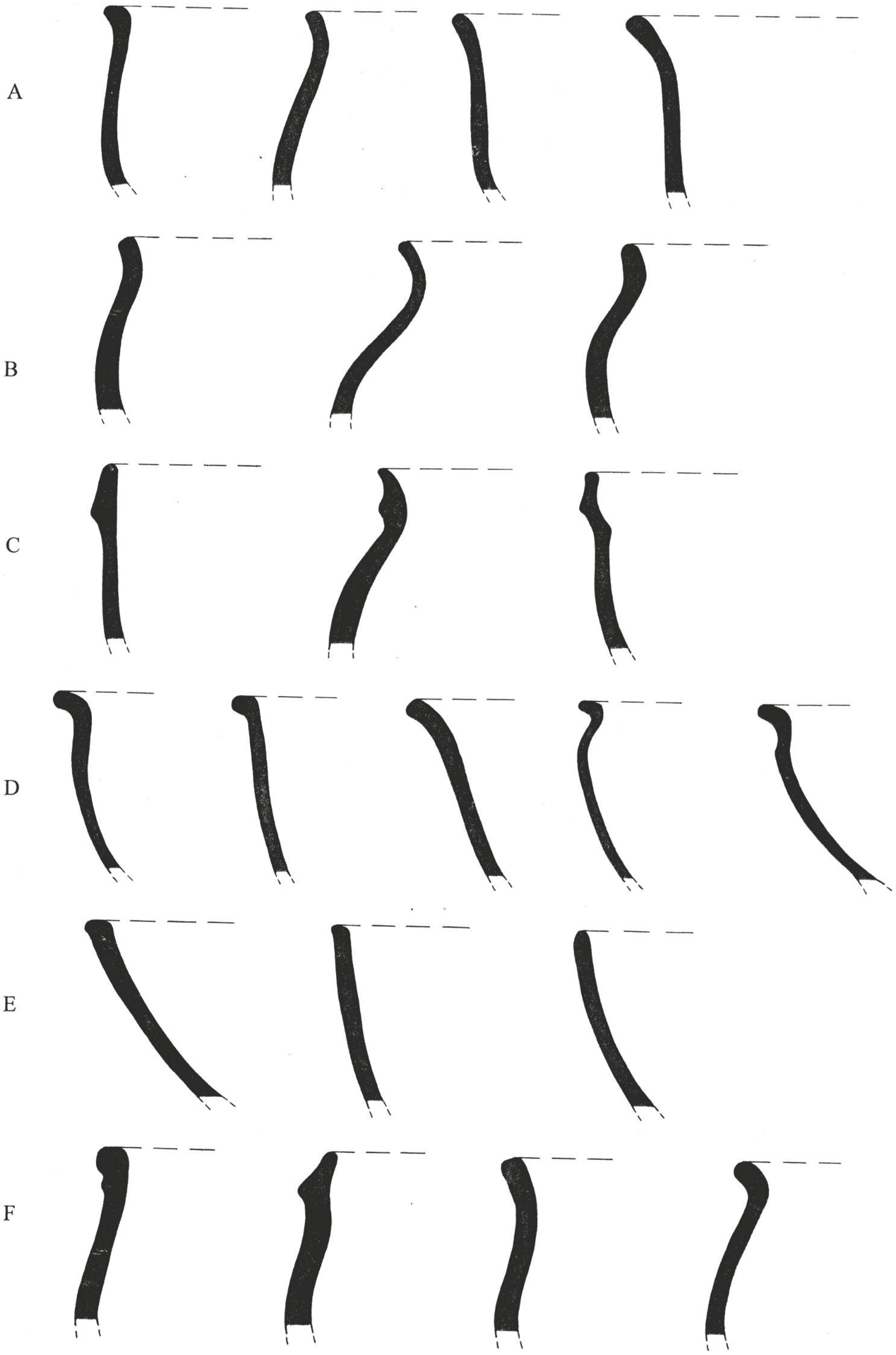

Fig. 6. Morphology of Lubāns Ware. A – beakers; B – S-shaped beakers; C – large bowls with curved sides; D – small bowls with curved rim; E – straight-sided rim; F – large vessels with curved rim.

form of the lip. This is very plastic or markedly flared, or only slightly everted (Fig. 6:D). Straight-sided bowls (20–28 cm rim diameter) include three types: a) with a rounded lip, b) with a flat, perpendicular lip and c) with a thickened, flat perpendicular lip (Fig. 6:E). The large vessels with a rim diameter of 25–40 cm have different forms of flared lips: a) flared rounded lip, b) more pronounced flared rounded lip, c) flared lip without any rounding, d) flat perpendicular lip and curved thickening under the rim, and e) a markedly thickened, double-rounded lip (Fig. 6:F).

The ornamentation of Lubāns Ware

Lubāns Ware was decorated with impressions of smooth and comb stamp, incised lines, impressions of cord wrapped on a stick, pits and various fine stamp impressions. Altogether, 27 different comb motifs were recorded, 29 smooth stamp and incised line motifs, 11 motifs in wrapped cord and six composite motifs using the above-mentioned elements. Also observed were 12 motifs with cord impressions in horizontal bands (Loze 1979, 100–107, Figs. 70–108).

The design composition was subject to strict canons, forming horizontal zones across all or most of the vessel surface. Fragments occur that show the use of textile impressions on the lower part of a decorated vessel.

Rows of outline and filled rhombuses are extensively used in pottery decoration, as is the rhombic net. Also occurring is the so-called 'sown field motif' – rhombic figures of wrapped cord impressions, divided into four equal parts with a pit at the centre.

The ornamental composition includes three different motifs that contribute to the decorative character of the vessel surface. Often, horizontal lines around the vessel surface augment the precisely laid out rows of outline rhombuses or zigzag lines. Likewise, the rhombic net used in the creation of these designs is strictly separated from rows of pits, filled triangles or zigzag lines. A closed row of outline rhombuses also occurs together with cord impressions.

The decoration on this pottery ware marks new trends in the decoration of pottery vessels in the Lake Lubâns Depression. The innovations appear in the zonal division of the design. The vessel surface was divided into equal horizontal zones and then filled with rhythmically arranged decorative motifs. Judging from the decoration on the upper part of the vessel, between two and four different motifs were used

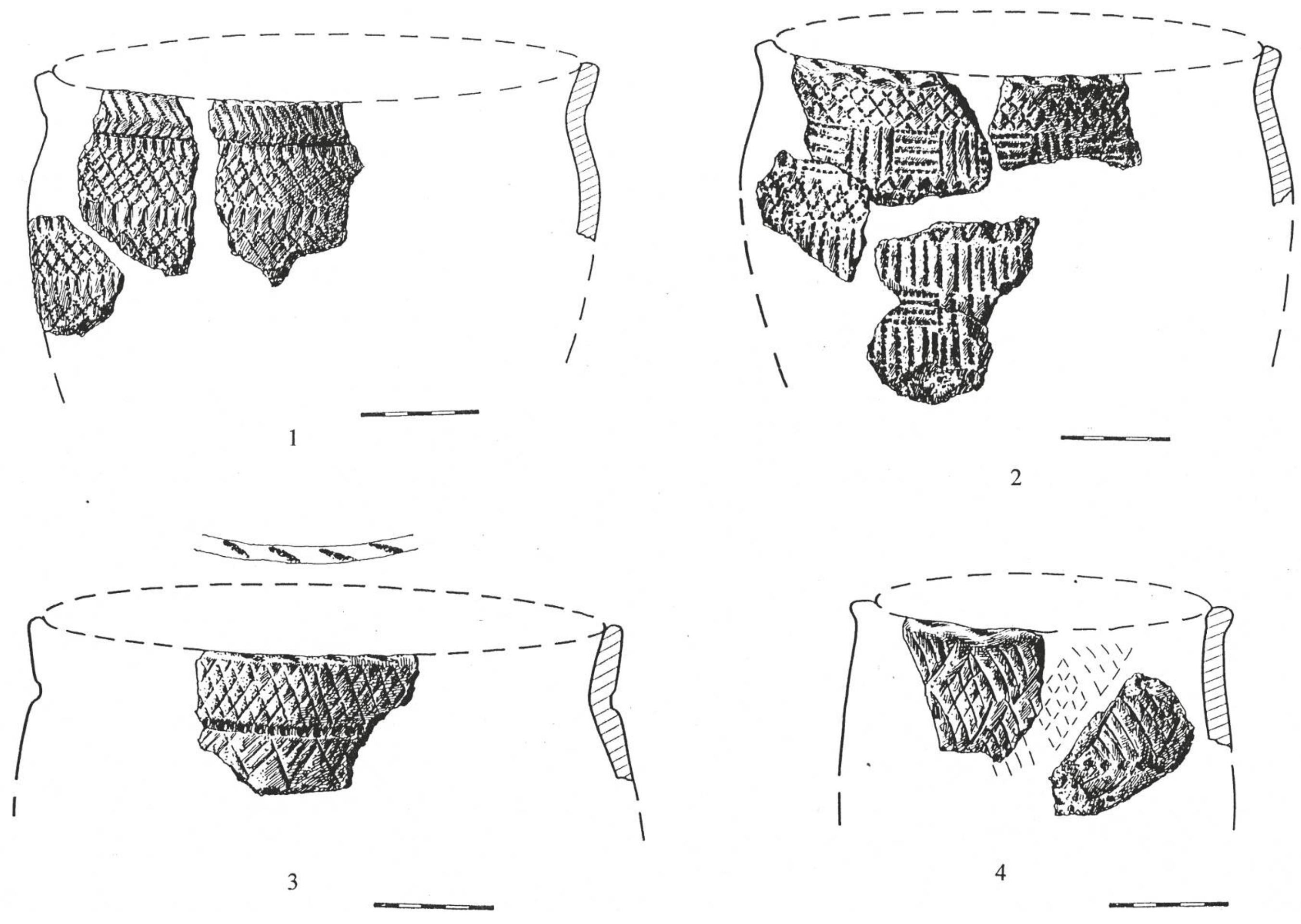

Fig. 7. Lubāns Ware: 1, 2, 4 – Abora I; 3 – Malmutas grīva.

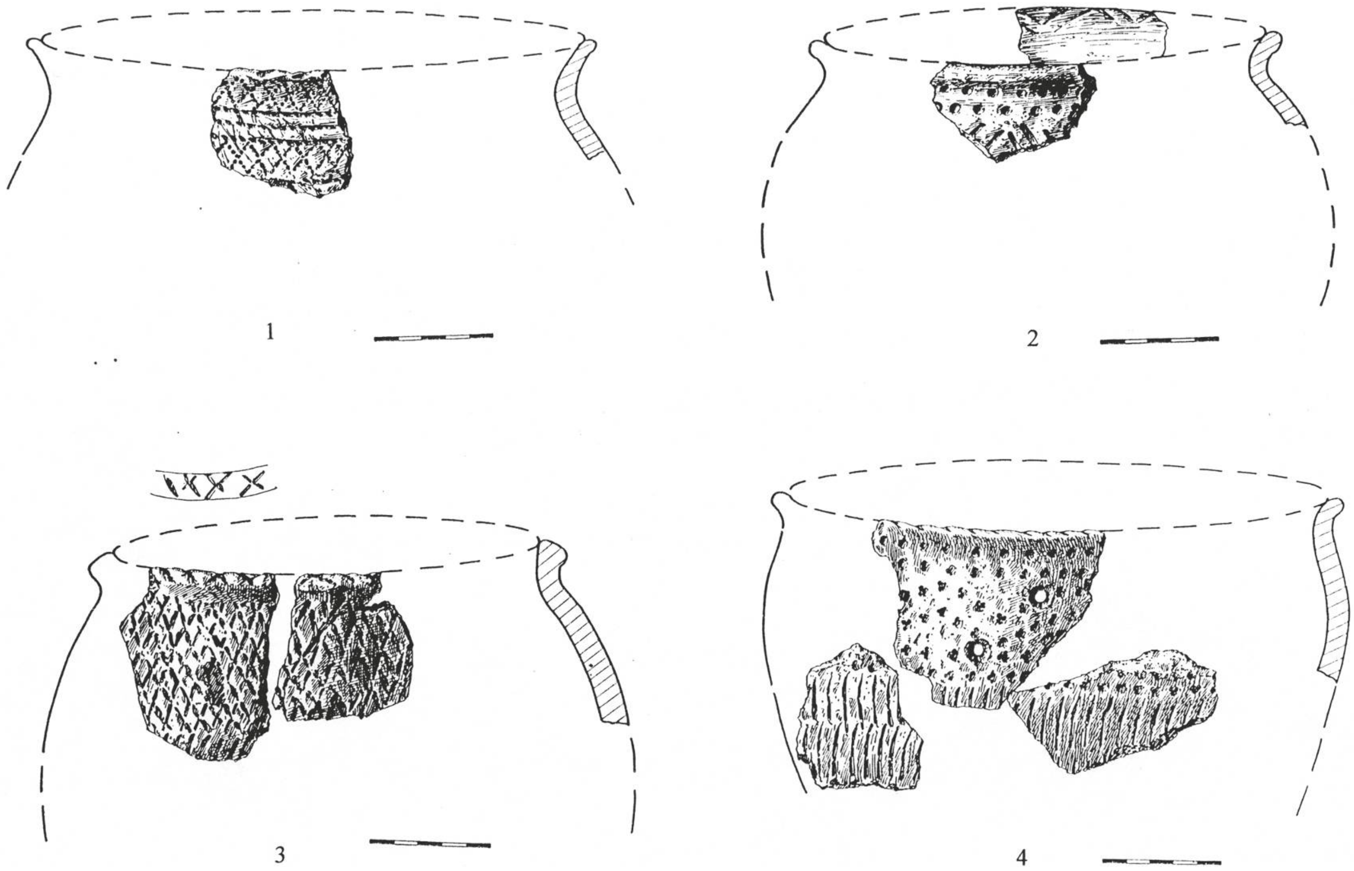

Fig. 8. Lubāns Ware: 1, 2, 4 – Abora I; 3 – Asne I.

to form a zone of decoration, including zigzag lines and bands, often also with rhombic net and rhombic band motifs, consisting of rows of outline rhombuses or filled rhombuses (Figs. 7, 8).

As regards technique, these decorative motifs were incised, or impressed with a smooth stamp, comb stamp or wrapped cord. Also employed were fine pits, arranged in separate horizontal zones or else rhythmically dividing horizontal zones of incised or comb-impressed ornaments. The design compositions on a particular vessel usually consist of motifs executed in one particular technique, less commonly employing two or even three techniques.

Twenty-eight incised or smooth-stamp motifs have been identified, including closely spaced vertical zigzags. Alongside very simple motifs, consisting only of vertically or obliquely impressed short straight lines and rows of pits, slanting crosses are also found (Loze 1979, Fig. 71:3–7,8,9,10). Other arrangements of incised lines also occur, such as a combination of zigzag lines or bands with straight vertical lines or horizontal bands. Symmetrically arranged incised lines at various oblique angles are combined with a rhombic net. A favoured motif such as the rhombus divided into smaller rhombuses was also used in a different arrangement – placed between hatched triangles without bases (Loze 1979, 102, Fig. 71:22,24,27).

The decorative zones of comb impressions on the vessel surface are similar. Particularly common is a horizontal band of joined rhombuses encircling the vessel body in a single row, forming a composition with horizontal lines of comb impressions together with a zigzag line or rhombic net.

Rows of joined rhombuses consisting of comb impressions also occur together with horizontal cord impressions. Cord impressions were used to make outline triangles without bases. Horizontal cord impressions were also employed to create ornamental zones in a single composition together with zones of rhombic net and obliquely arranged lines.

The character of decoration on Lubāns Ware was subject to strict canons, ensuring an easily perceived and pleasant rhythm.

With regard to the design structure of ornamentation on Lubāns Ware, only a few parallels for the characteristic rhombic motifs can be found on the vessels from Fatyanovo Culture graves. There they have different functions, decorating only the vessel shoulders, and they are grouped in separate vertical zones. The main commonly occurring motifs are the row of joined rhombuses, the outline and filled rhombus, the rhombic net and dense rhombic bands (Kraynov

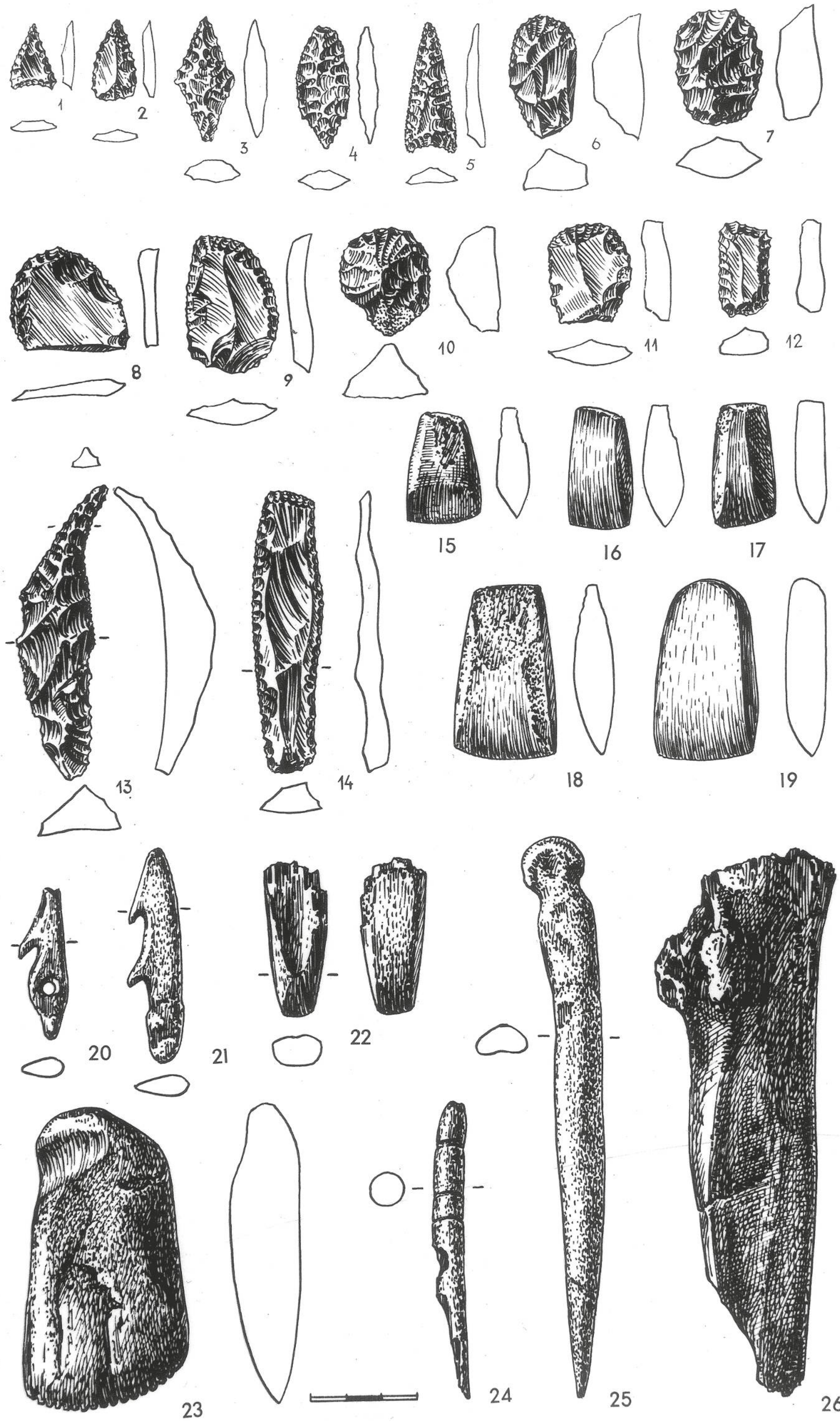
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Fig. 9. Inventory of the Lagaža site: 1–5 – flint points; 7–12 – flint scrapers; 13 – flint borer; 14 – flint knife; 15–19 – slate chisels; 20–21 – bone harpoons; 22 – bone chisel, 23 – antler implement with denticulate edge; 24 – bone pin; 25 – bone awl; 26 – bone dagger.

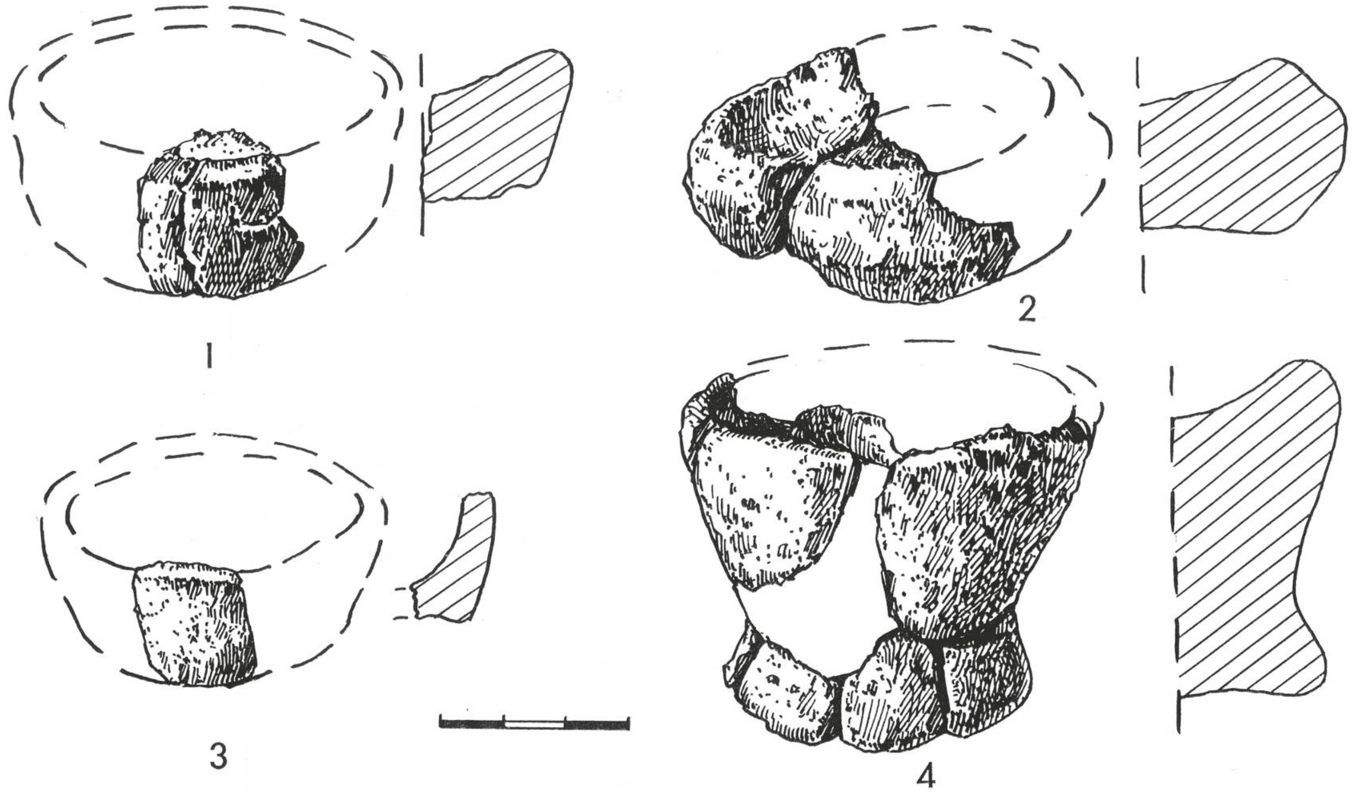

Fig. 10. Crucibles for casting bronze. Lagaža.

1972, Fig. 45: 18–21, 24, 27, Fig. 46: 23; Kraynov / Gadzyatskaya 1987, 35, Fig. 50; Kraynov 1964, Fig. XXIX: 78).

The decorative motifs on Lubāns Ware also have similarities with those found on Bell Beaker Culture vessels. These include zones of criss-cross lines, rhombic figures and zigzag lines (Guilaine 1967, Figs. 36, 45).

Similarities between Bell Beaker pottery and Lubāns Ware in the choice of particular vessel forms and the use of particular decorative motifs in the creation of the overall decorative composition have previously been described by Evžen Neustupný (Neustupný 1982, 213). He has also remarked that Lubāns Ware could have developed in the particular region without any Corded Ware Culture contribution and that it is closer to the ornamental style of the Bell Beaker Culture horizon. The close connection between these two cultures in terms of territory and age is evident (Neustupný 1982, 283).

The inventory

The inventory of this time, judging from the Lagaža finds, includes triangular (Fig. 9:1,2,5), rhombic (Fig. 9:3) and leaf-shaped flint arrowheads, as well as examples with a separate short tang (Fig. 9:4). Rounded, oval and rectangular scrapers predominate, often with a high frontal face and retouched side and front faces (Fig. 9:6–12). Flint knifes are of regular form, made of fairly long blades with one or two working edges (Fig. 9:14). Flint borers occur, with a long or short tip (Fig. 9:13). Worthy of mention is a figural flint artefact, consisting of a stem and crescent, most likely representing a stylised bull's head.

Slate tools include various types of large, medium, small and miniature chisels (Fig. 9:15–19). Bone and antler were also used to make chisels (Fig. 9:22). One of the latter tools with fine notches in the blade was used as a stamp for decorating pottery (Fig. 9:23). Bone harpoons, arrowheads, knives and daggers, awls and a dress-pin augment this assemblage (Fig. 9:24–26). There is also a bone knife with a human face engraved in two flat surfaces on the handle.

Crucibles for casting bronze

One of the crucibles found at Lagaža is in the form of a beaker with a foot (Fig. 10:4). A fragment of bronze on its wall was determined as having the following composition: Cu (main component), with Sn (3.0%), Pb (0.12%), Ag (0.007%), Sb (0.12%), As (0.19%), Fe (3.5%), Ni (0.006%), Mn (0.05%) and P (abundant) (Spectroscopy Laboratory of the Moscow Institute of Archaeology, No. 5878).

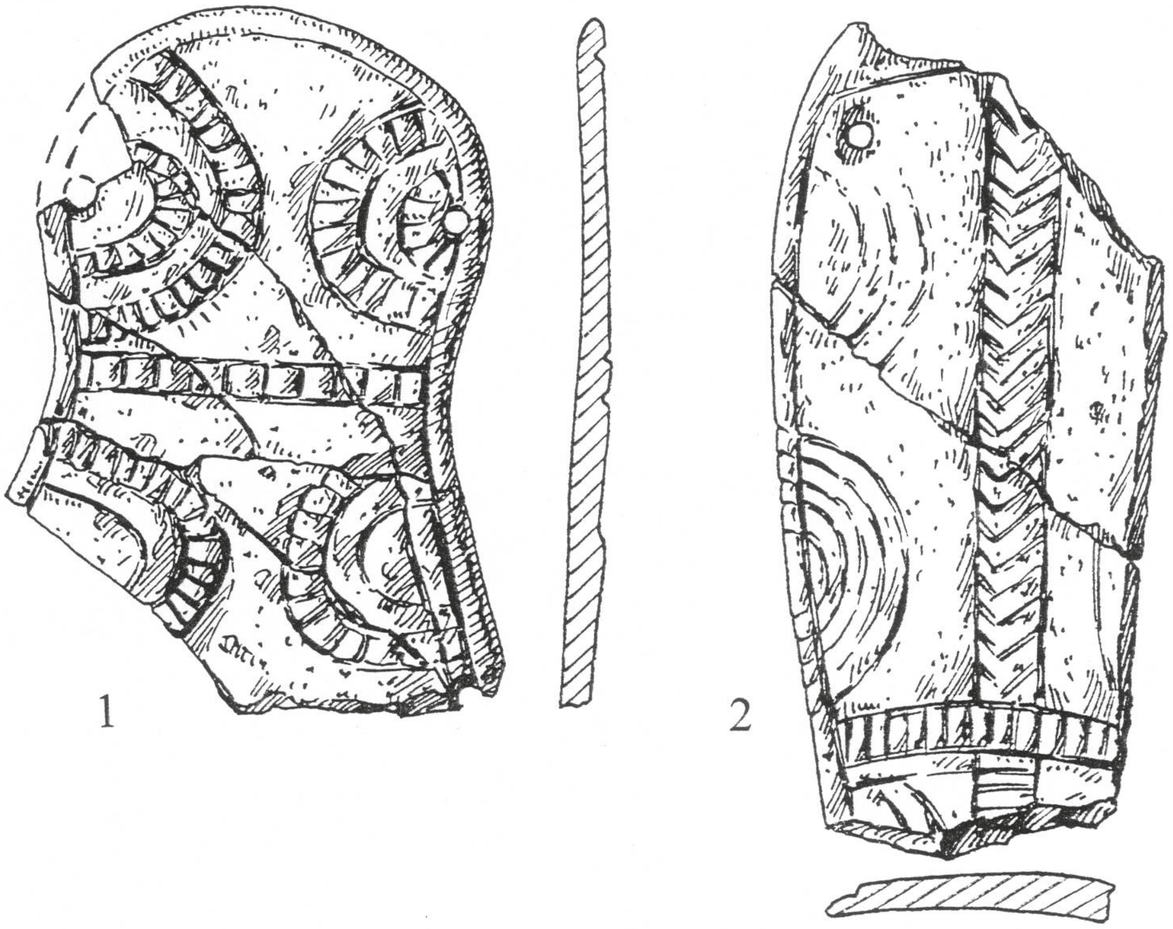

Fig. 11. Antler wrist-guards. Lagaža.

Antler wrist guards

A special find category includes figural antler plaquettes, one of which has a markedly bell-shaped form, another being in the form of a rounded rectangle (Fig. 11). The decoration on them includes openwork arch motifs, arranged in pairs. These are divided by an openwork band.

The first plaquette is possibly symbolic of a bell beaker, decorated with the arch motifs so characteristic of the pottery of the Upper Daugava Basin.

The ornamental motifs and composition on both of the Lagaža antler plaquettes are in a different style. Arch motifs, in the form of lines or bands, have previously not been found in the Neolithic material from the territory of Latvia. The decoration of both plaquettes consists of two pairs of arch motifs, but in one case the pairs of arches are divided by a horizontal band, while in the other case they are separated by an incised vertical band.

Arch motifs are characteristic of the pottery of the North Belarusian Culture in the Upper Daugava Basin, which is discussed below.

Amber ornaments

Amber was still being worked at this time. A total of 48 ornaments were found at Lagaža, as well as 14 whole and flaked pieces of amber and debitage in the form of chips. At the Asne I site (from an area of 60 m^2) ornaments and semi-manufactured pieces numbered 38. Of course, there were stocks of unworked amber pieces at this site as well. The ornaments include flat pendants in the approximate shape of an elongated trapezium (Fig. 12:6, 9–11) and more rounded tooth-shaped pendants perforated from two surfaces – from the top and the side (Fig. 12:2,4,7,8). Predominant among the beads are button-shaped examples, of circular or rectangular outline, less commonly trapezoidal (Fig. 12:12–22). Mention should be made of an amber tablet with a hole in the middle of the front and perforations drilled from two faces at the ends (Fig. 12:13) and a figural – mushroom-shaped – pendant (Fig. 12:1).

These ornaments mark the final episode in amber processing in the Lake Lubāns Basin, when the population left the region altogether because of a natural catastrophe.

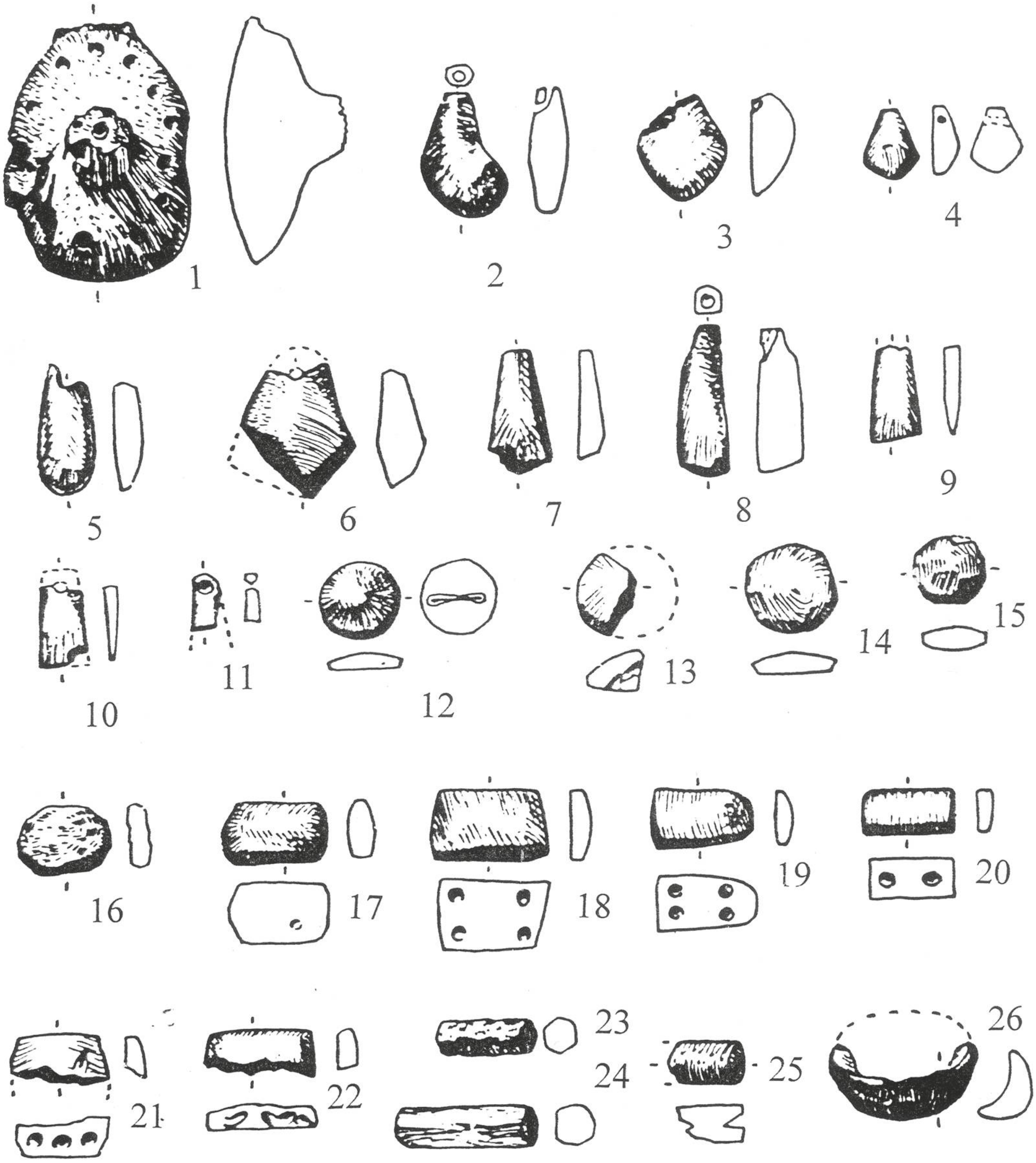

Fig. 12. Amber ornaments. Asne I. 1 – mushroom-shaped pendant; 2–11 – pendants; 12, 18–22 – button-shaped beads with V-shaped perforation; 14–17 – semi-manufactured button-shaped beads; 23–25 – semi-manufactured cylindrical beads; 26 – vessel fragment.

As is known, circular button-shaped beads with a V-shaped perforation are particularly characteristic of the Bell Beaker Culture in Central and Western Europe (Bubner 1980, 54).

The question should be posed as to where these amber 'buttons' where supplied from. Of course, it was not the amberworking centre in Jutland. It could have been the Żuławy region of amber workshops in the lower Vistula area, where these 'buttons' were made in the thousands (Mazurowski 1984, 6, Fig. 2). Hundreds of such 'buttons' were also made at the sites of the Lake Lubāns Depression (Loze 2000, 75–77) and on the Couronian Spit (Klebs 1882, Fig. II: 10-13, 22-24). The question is of the extent of the exchange contacts maintained by the Bell Beaker Culture bloc. Amber 'buttons' could have spread very far from the amberworking centres. Presumably, in the Eneolithic the Lubāns amberworking centre still maintained contacts with areas to the east and south-east. Such exchange may have taken place through intermediaries who redirected it appropriately.

The North Belarusian Culture

In the late 1960s, analogous pottery was found in the area between the Daugava and Lovat in connection with intensive archaeological excavation by the Section for Research on the History of Primitive Society at the State Hermitage under the direction of A. M. Miklyaev. This pottery was found in the basin of Lakes Usvyaty and Zhizhitsa, where it forms Period Four of the cultural development of this region, with three phases: k, l and m (Miklyaev 1994, 23, Dolukhanov / Miklyaev 1986, 88). The first two phases were observed at all the excavated settlement sites in the region, while the last one occurred only at Usvyaty I and the sites on islands in the lakes (Miklyaev 1995, 21).

Acquaintance with this pottery in the archaeological collections of the State Hermitage in 1989, while A M. Miklyaev was still active, and after his death in after 1993 has permitted the identification not only of similarities in form, but also common features of ornamentation (Usvyaty IY A, accession nos. 891, 1453, 1665, 2521, 3313).

This group of pottery at such sites as Dubokray I and Naumovo includes round-based and flat-based vessels with decoration characteristically arranged in horizontal bands across the whole vessel surface. This pottery, with vertical incised zigzags, rhombic net designs and rows of circles, made by impressing a hollow bird-bone, are the same as decorative motifs found on Lubāns Ware, although developed arch motifs occur, not found on Lubāns Ware (but occurring on an antler plaquette).

This pottery has been ascribed to the Post-Corded Ware Pottery cultural unit and dated to the Late Neolithic (Miklyaev 1994, 21). The fabric of pottery in the ‘l’ phase of this culture began to be tempered with crushed rock.

Table 3. Radiocarbon dates for the North Belarusian Culture (Miklyaev 1994). Calibrated according to OxCal version 3.3, using atmospheric curve after Stuiver et al. 1998.

Lab. code	Site	Phase	^{14}C BC	Cal. BC
LE-1004	Naumovo	K	3690±70	2200–2160 (8.4%) 2150–1960 (59.8%)
LE-816	Naumovo	K	3700±70	2200–2010 (61.5%) 2000–1970 (6.7%)
TA - 634	Naumovo	L	3650±70	2140–1920 (68.2%)
TA-756	Naumovo	L	3620±80	2140–2080 (13.3%) 2050–1880 (53.7%) 1840–1830 (1.3%)
LE-2739	Dubokraj I	6th trans- -gression	3240±40	1600–1580 (4.3%) 1530–1430 (63.9%)

It should be noted that the culture comes to an end during phase ‘l’. This is indicated by extensive disturbance caused by a transgressive cycle in the water level, recorded at Dubokray I, where a pine trunk was dated, washed to the site by wave action and found on top of the building remains. Here it remains only to mention that Lagaža has also not produced any later date than this one for the pine trunk at Dubokray I (Table 1).

Such pottery has also been found in northern Belarus, recorded in the basin of the left bank of the River Daugava – at the Krivina I, Osovets II, Skriplevo, Shashalovka, Zareche and Dvupole sites (Zaykovskiy 1985, 13–15, 1988, 27–28). Here too, it has been noted that flat-based vessels in addition to round-based forms are characteristic of this culture. As indicated in the above-mentioned literature, analogies with the pottery from the Lake Lubāns Depression are observable in the later phase of development, when rock-tempered pottery was being made. The North Belarusian Ware is regarded as belonging to the Post-Corded Ware cultural unit (Zaykovskiy 1985, 15), and it has been indicated that the culture had local roots and its development was influenced by the Upper Dnieper Neolithic culture.

The Šagara Culture

A new impulse for the study of the eastern set of Eneolithic cultures came from research on sites of the Šagara Type in Lakeland Meshchera (*Ozernaya Meshchera*) – in the transitional area between the Klazma River Basin and the Middle Volga Basin (Kaverzneva 1994, 27–58). During archaeological excavations in the 1980s at one of the newly discovered sites, Šagara 5, burials of Eneolithic date were found, the radiocarbon dates being close to those for the Lubāns-North Belarusian Culture.

The Šagara type-sites are in chronological terms considerably earlier than the two above-described cultural units. This material has already been systematically described in archaeological literature, and there is a series of radiocarbon dates.

The time of occupation has been shown to be 4310–4110 BP, corresponding to the dates for the Corded Ware Culture in the East Baltic. A later date comes from the palisade of Šagara V, dated to 3830–3740 BP, i.e. not synchronous with the activities of the people of the Lubāns and North Belarusian Culture.

On the other hand, interesting from the chronological point of view are the burials in the Šagara cemetery, which serve to date the vessels in the grave inventories and are synchronous with the Lagaža site in the Lake Lubāns Depression and the Naumovo site in the Daugava-Lovat interfluve.

Table 4. Radiocarbon dates for burials at Šagara cemetery (Kaverzneva / Folomeev 1998)

Lab. code	Site	^{14}C BC	Cal. BC
burial 13	GIN-5455	3760±40	2279–2137
burial 33	GIN-5454	3350±50	2133–1959
burial 25	GIN-5453	3660±50	2136–1972
burial 28	GIN-5452	3500±150	2030–1670

The thin-walled pottery of Šagara cemetery, tempered with sand and organics, does not show much variation in the form of funerary vessels, although it is observed that round-based vessels are provided with the earlier burials, while the flat-based ones are found with later burials. Two forms of round-based vessels occur: (1) C-shaped, and (2) short-necked and slightly flaring (Kaverzneva / Folomeev 1998, Fig. 5:4-5). On the other hand, the flat-based vessels have a sharply flared lip and more or less distinctly curved sides.

There is also a flat-based bowl with straight sides gradually narrowing towards the base, the diameter of the base of the vessel falling to half of the diameter at the rim. The vessel was no higher than 9-15 cm.

In spite of the differences in temper, Šagara Ware from the sites in this area provides specialists with interesting material for comparison with the pottery of the Lubāns-North Belarusian Culture, at least in terms of the system of ornamentation. Detailed analysis of ornamental motifs and composition has permitted E. Kaverzneva to demonstrate the considerable influence of decorative motifs of the Fatyanovo Culture on the decoration of the pottery from the Šagara sites (19 out of 38 distinguished motifs are identical) (Kaverzneva 1994, 52). Detailed data has not yet been published on the morphological features of the pottery from the Šagara sites, neither have publications appeared so far on the pottery of Dubokray I, Naumovo and other sites of the Daugava-Lovat interfluve. This is a difficult task, bearing in mind the degree of fragmentation of vessels at these sites. Widely used in pottery decoration at the Šagara sites are zigzag, rhombus and rhombic net motifs, and hatched triangles, characteristic not only of the pottery of the Fatyanovo Culture, but also of pottery decoration in both of the previously mentioned cultures. Already in the early 1970s it was pointed out that the ornamentation on Lubāns Ware is partially shared with the system of ornamentation in the Fatyanovo Culture (Loze 1979, 107–108). However, the design structure of Lubāns Ware was subject to different rules, forming horizontal zones over the whole vessel surface, with only an occasional interspersed vertical impression of one of the types of stamp.

The material adduced here from the Lake Lubāns wetlands, in close accord with the limited information about the North Belarusian and Šagara Cultures, permits us to consider the appearance on the map of the East Baltic and the Eastern European Forest Zone of an Eneolithic cultural unit that has not previously received sufficient attention. Now is the time for elaborating criteria for the inclusion of these cultures in a greater cultural unit.

References

Bubner T. 1980. Zum Beginn und Alfaufder Glockenbecherkultur. *Hamburger Beiträge zur Archäologie* VII, 53–62.

Dolukhanov P. M. / Miklyaev A. M. 1986. Prehistoric lacustrine pile dwelling in the North-western part of the USSR. *Fennoscandia Archaeologica* III, 81–89.

Guilaine J. 1967. *La Civilisation des Vase Campaniforme dans les Pyrénées Francaises*. Carcassone.

Kaverzneva E. / Folomeev B.A. 1998. Radiouglerodnaya khronologiya pamyatnikov epokhi eneolita-ranney bronzy Ozernoy Meshchery. In: Studzickaja E.V. (ed.), *Arkheologicheskiy sbornik*, 5–19. Moskva.

Kaverzneva E.D. 1994. Keramika Ozernoy Meshchery epokhi neolita i ranney bronzy. In: Polyakova G.F. (ed.), *Drevnosti Oki*, 27–58. Moskva.

Klebs R. 1882. *Des Bernsteinschmuck der Steinzeit von der Baggerei bei Schwarzort und anderen Lokalitäten Preussens*. Königsberg.

Kraynov D.A. 1964. *Pamyatniki fatyanovskoy kultury. Yaroslavsko-Kalininskaya gruppa*. Moskva.

Kraynov D.A. 1972. *Drevnosti Volgo-Okskogo mezhdurechya*. Moskva.

Kraynov D.A. / Gadzyatskaya O.S. 1987. *Fatyanovskaya kultura Yaroslavskogo Povolzhya*. Moskva.

LOZE I. 1979. *Pozdniy neolit i rannaya bronza Lubanskoy ravniny*. Riga.

LOZE I. 1994. Dažas auklas keramikas un agrâ bronzas laikmeta kultűru iezîmes Latvijas teritorijâ. *Arheoloģija un Etnogrâfija* 17, 72–75.

LOZE I. 2000. Late Neolithic Amber from the Lubâna Wetlands. *Acta Academiae Artium Vilnensis* 20, 63–78.

MAZUROWSKI R. F. 1984. Amber treatment workshops of the Rzucewo culture in Żuławy. *Przegląd Archeologiczny* 32, 5–60.

MIKLYAEV A.M. 1994. Kamenniy-zhelezniy vek v mezhdureche Zapadnoy Dviny i Lovati. In: VILINBAKHOV G.V. / SHCHIKIN M.B. (eds.), *Petersburskiy arkheologicheskiy vestnik*, 5-39. Saint Peterburg.

NEUSTUPNÝ E. 1982. Prehistoric migrations by infiltration. *Archeologické rozhledy* XXXIV, 278–293.

ZAYKOVSKIY E.M. 1985. Neolit i bronzoviy vek Belorusskogo Podvinya. Manuscript of PhD dissertation. Vilnius.

ZAYKOVSKIY E.M. 1988. Etapy razvitya neolita Severnoy Belorussii. In: POBOLJ L.D. / TAUTAVIČUS A. (eds.), *Drevnosti Litvy i Belorussii*, 23–28. Vilnius.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

Northern and Southern Bell Beakers in Poland

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Introduction

Traditionally, archaeological literature concerning Central Europe has distinguished two principal enclaves of Bell Beakers in the drainage basins of the Vistula and Oder rivers: a southern Polish (Kamieńska / Kulczycka-Leciejewiczowa 1964; 1970; Wojciechowski 1987; Machnik 1979; 1987, 135-142; Harrison 1980, 58-63), and a northern Polish one (Kośko 1979; Makarowicz / Czebreszuk 1995; Czebreszuk 1996; 1998; 2001; Makarowicz 1998; Czebreszuk / Szmyt 2001). The former comprises two Beaker groups in the upper Oder drainage – one in Lower Silesia and one in Upper Silesia and still another one in the upper Vistula basin, in Little Poland (Fig. 1). The other enclave, situated on the Polish Lowlands, is characterized by cultural syncretism. Some Bell Beaker package elements occur here in the context of the late *Einzelgrabkultur* and the Iwno Culture (Fig. 1; Czebreszuk 1998; 2001, 134; Makarowicz 1998, 274–277).

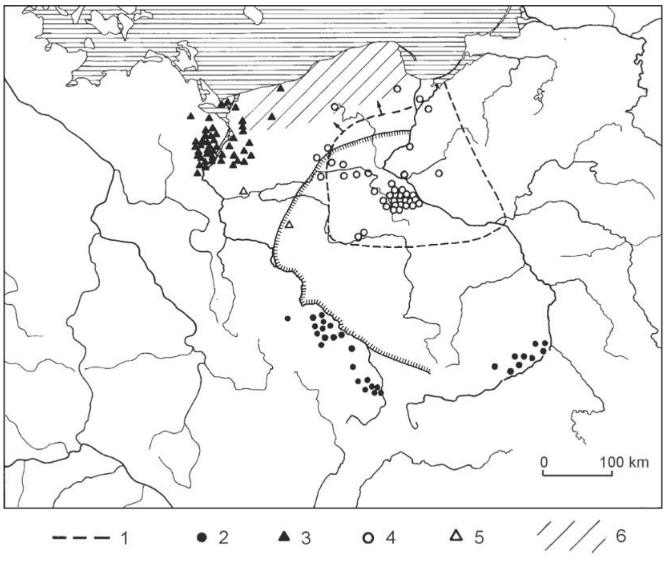

Fig. 1. Spatial distribution of the Bell Beaker traits in northern and southern Poland. 1 – Spatial range of the Iwno Culture (northern Beakers); 2 – Bell Beaker sites in southern Poland; 3 – 'pure' Bell Beakers or Beaker traits mainly in the *Oderschnurkeramik* context; 4 – Bell Beaker traits inside the Iwno Culture; 5 – Bell Beaker traits without defined context; 6 – numerous traits of the Bell Beaker tradition, mainly flint daggers. After Czebreszuk / Szmyt 2001, with amendments; Makarowicz 2003, with amendments.

Sources and Chronology

The two groupings, the southern and the northern, differ in several aspects. In the first instance, traces of Bell Beaker residence are documented in burial features: cemeteries, single graves and chance discoveries, in the second, these also include settlements. However, it is only with reference to the southern Polish agglomerations that one can talk about "genuine" Beakers, dated between 2500 and 2200 BC. From this area we know of ten ^{14}C dates (all from Samborzec) obtained from bones, i.e. a short-living organic material (Budziszewski / Haduch / Włodarczak 2003). The sum of probability distribution of all the calibrated dates stays in the interval between 2470 and 2270 BC (Fig. 2a). The agglomerations are closely related to their Czech and Moravian counterparts, an enclave in southwestern Slovakia, and especially to the so-called Csepel group in the Middle Danube basin (Machnik 1979; 1987, 141; Wojciechowski 1987, 61ff; see also: Heyd 2001; Kalicz-Schreiber / Kalicz 2001).

At the Polish Lowlands, in the mid of 3rd millennium BC, the Iwno Culture emerged, a syncretic unit that combines traits of Bell Beakers, the Single Grave Culture and – to a lesser degree – early Únětice Culture (Kośko 1979, 166ff; 1991, 49; Czebreszuk 1996, 196; 1998; 2001, 274ff; Makarowicz 1998, 130ff; 2000a, 538). It is included into the Northern Euro-

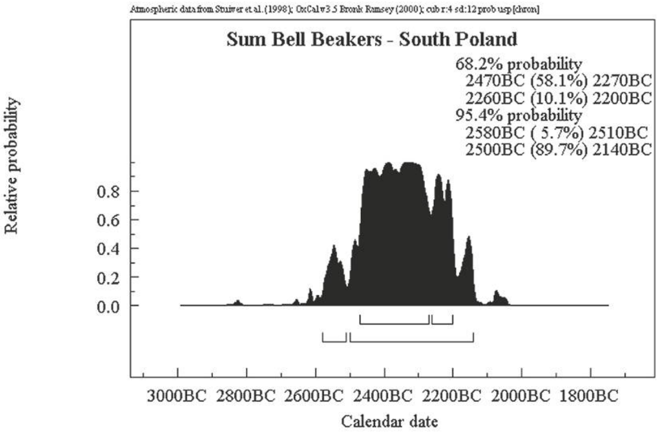

Fig. 2a. Sum of probability distribution of Bell Beaker ^{14}C datings from southern Poland (Little Poland).

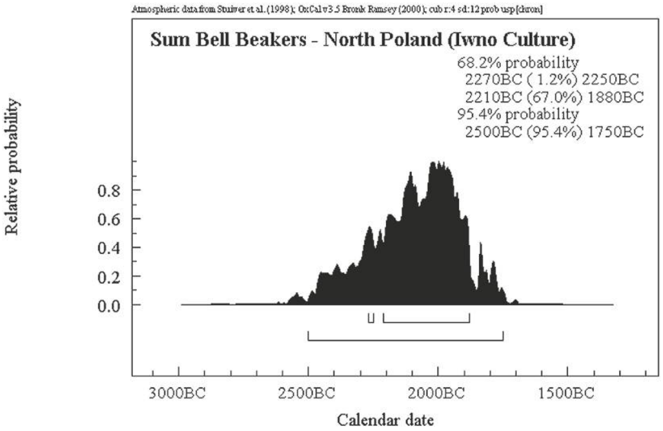

Fig. 2b. Sum of probability distribution of Iwno Culture ^{14}C datings from northern Poland (Kujawy, Pałuki and the Chełmno Land).

pean Province of Bell Beakers and dated, on the basis of twenty ^{14}C determinations (18 obtained from bone, 2 from charcoal), between 2500/2400 and 1800 BC (recently Czebreszuk / Szmyt 2001, Fig. 10; Makarowicz 2001, 217). The sum of probability distribution of all the calibrated dates obtained for the Iwno Culture stays between 2210 and 1880 BC (Fig. 2b).

Iwno Culture is known from over 350 sites situated in Kujawy, Pałuki, Eastern Pomerania, Chełmno Land and Great Poland (Fig. 1). Mainly in the first two phases, between the middle and end of the 3rd millennium BC, does it show the presence of "true" Beaker traits. In the third phase, between 2050/2000 and 1800 BC, the Iwno Culture underwent a certain únětization observable – for instance – in the adaptation of Únětice Culture-style metal goods buried as grave-goods and in one-type and multi-type hoards (Machnik 1977, 154ff; 1978; Kośko 1979; Blajer 1990; Makarowicz 1998, 250ff; 2000b).

The oldest Iwno Culture (Fig. 3 and Fig. 4) shows syncretism of Bell Beakers and the late Single Grave Culture. Vessel inventories include strait-walled and bell beakers, amphorae, single-handle cups and jugs, hemispherical bowls often supported by legs and large pots. The dominant form of decoration is toothed stamp ornament, horizontal lines impressed with a delicate cord, incised ornament arranged in zones (zig zag motifs, multiple horizontal and oblique lines) and a cordon under the rim. The pottery technology shows two formulas in the whole period of Iwno Culture development. Thin-walled vessels are well fired, have smooth surfaces and contain a temper of fine-grain broken stone. Thick-walled vessels (domestic pottery) contain a temper of coarse broken stone. Amber products are rare. It is probably to this phase that five wristguards (Fig. 5:7, 8, 10, 11, one still unpublished), several flint daggers (Fig. 5:2–4,12–16), rare flint sickles, an amber necklace (Fig. 5:1) a flint blade of halberd (Fig. 5:5) and a lunula may be related (Fig. 5:9).

The middle Iwno Culture (Fig. 6) is characterized by tulip-shaped and bell beakers, vases and hemispherical bowls. Among techniques used were incisions, relief (appliqué) ornaments and strokes with only a minor participation of tooth-stamped and cord ornaments. A clear domination of zone-metopic and zig zag motifs, horizontal, vertical and oblique lines, bosses and cordons under the rim is observable. Amber products are relatively infrequently found in graves.

Some analogies to the pottery of these two phases of Iwno Culture come from the northern part of Central Europe: Schleswig-Holstein, Mecklenburg, Brandenburg, Lower Saxony and Vorpommern (Struve 1955; Strahl 1990; Jacobs 1991; Rassmann 1993).

In the third phase of the Iwno Culture, strait-walled beakers are rare while amphorae and jugs disappear altogether. The use of vases, S-profile pots, cups, and bowls is common. Toothed-stamp and cord ornaments are gone. What is left, however, are a variety of relief bosses and cordons under the rim, sometimes multiple ones, and patterns of incised lines in a variety of arrangements (chevrons, horizontal, metopic and oblique lines). It is only in that phase that metal goods appear. These are imported goods of classic Únětice style such as daggers, low-flanged axes, *Ösenringen*, bracelets, and *Ösenkopfnadeln*. Higher incidence of amber products such as beads and discs is observed. It is also that phase that the practice of depositing one-type and multi-type hoards, especially in Pomerania, Pałuki and Kujawy should be associated with (Kośko 1979; Makarowicz 2000b).

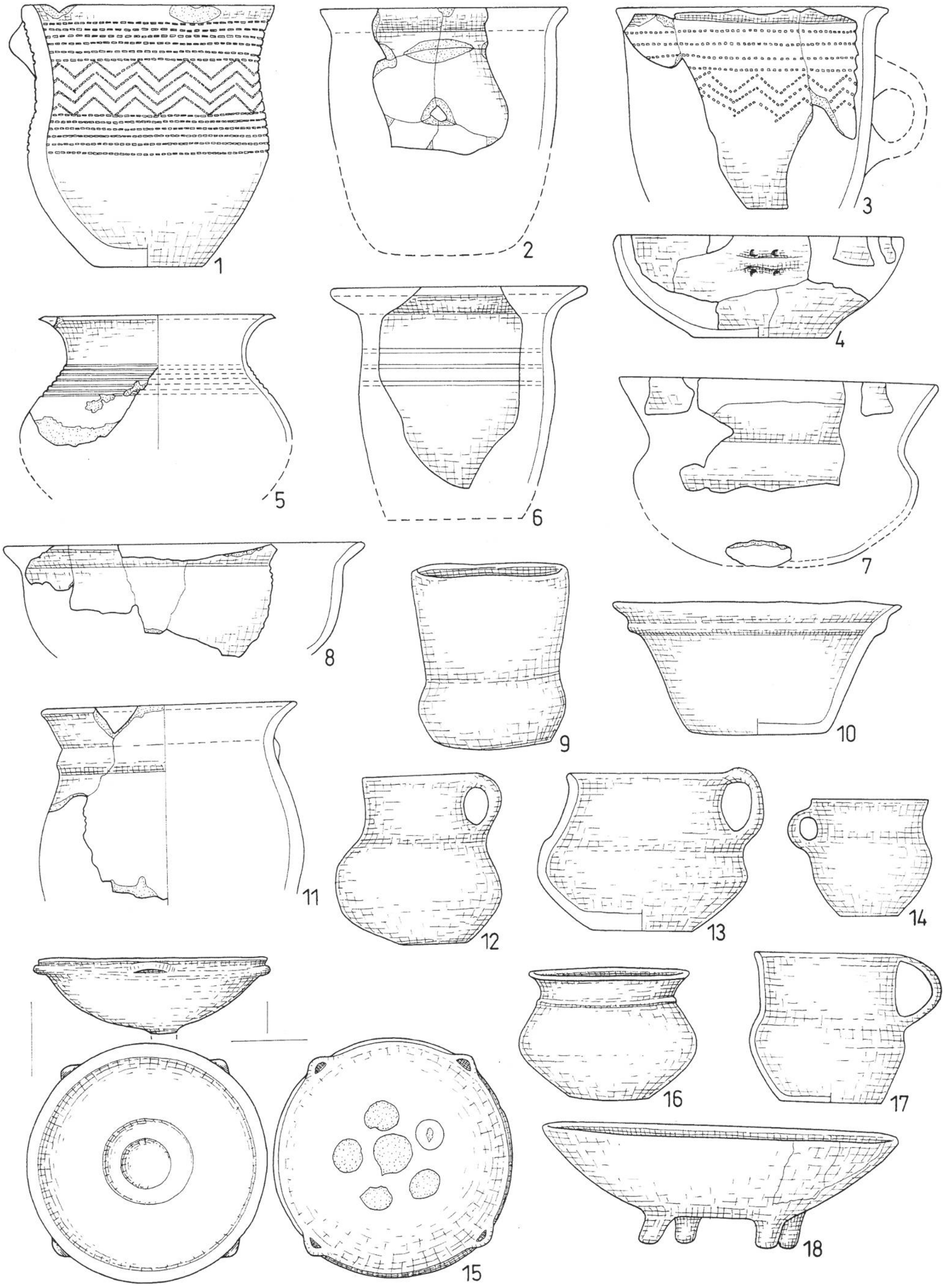

Fig. 3. Selection of Iwno Culture pottery (the oldest phase) from Kujawy and Pałuki, northern Poland. 1 – vicinity of Żnin, from a grave; 2, 3, 6 – Narkowo, site 16, from a settlement; 4 – Strzelce, site 1, barrow I; 5, 11 – Biskupin, site 2a, from an enclosure; 7 – Smarglin, site 53, from a settlement; 8 – Krusza Zamkowa, site 3, from a settlement; 9 – Dobre, site 6, pit 6; 10 – Siniarzewo, site 1, grave H 21; 12 – Giżewo, site 1, from a grave; 13 – Szarlej, site 10, from a grave; 14 – Brześć Kujawski, site 5, from a settlement; 15 – Dobre, site 6, grave I; 16, 18 – Modliborzyce, site 1, grave 4; 17 – Wojdal, site 1, grave 4 (different scales). After Sarnowska 1969; Kośko 1979; Makarowicz / Czebreszuk 1995; Czebreszuk 1996; Makarowicz 1998.

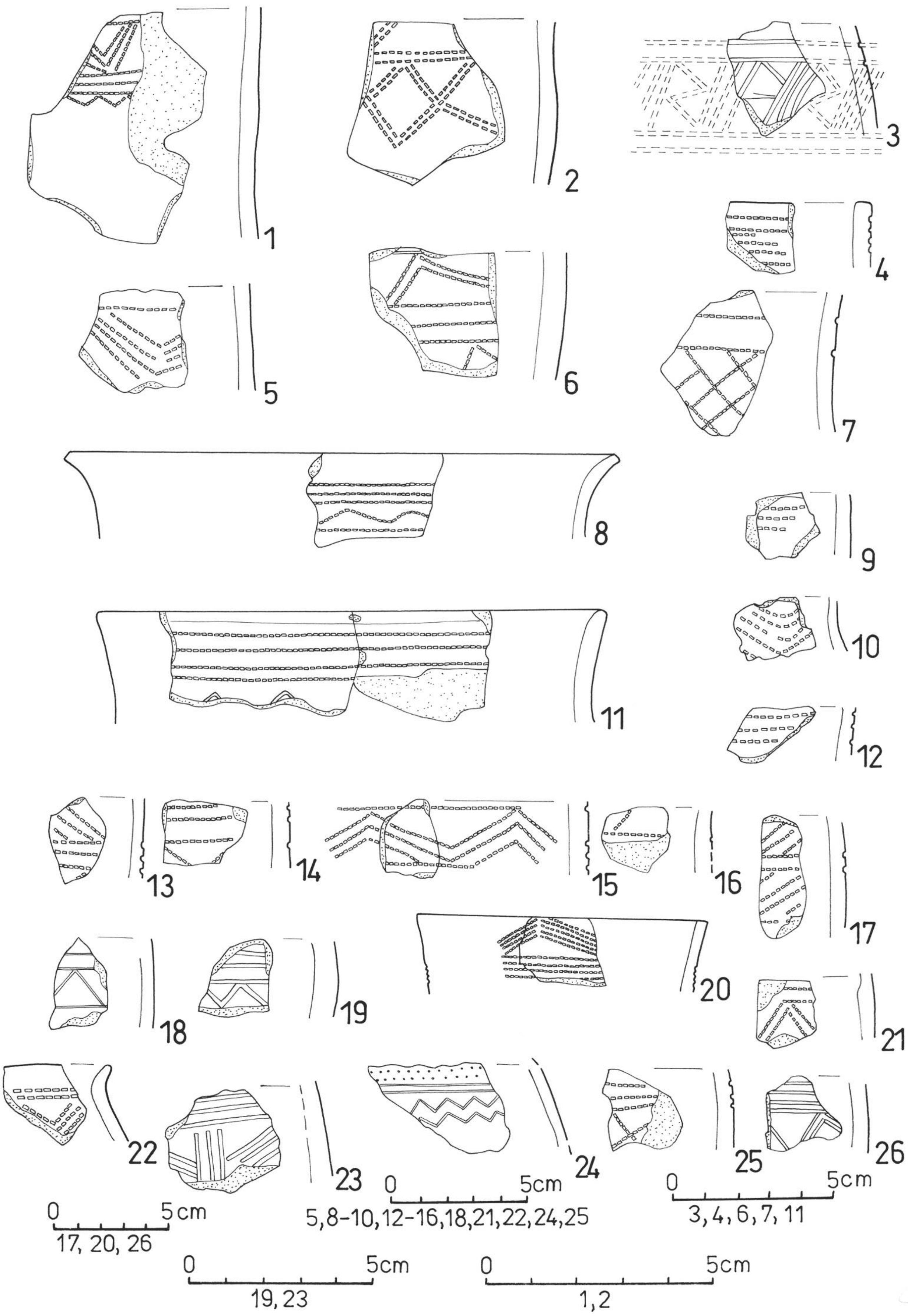
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Fig. 4. Selection of Iwno Culture sherds (the oldest phase) from Kujawy and the Chełmno Land, northern Poland (settlement materials only). 1, 2, 6, 11, 19 – Narkowo, site 16; 3 – Dęby, site 29; 4, 7 – Stara Wieś, site 9A; 5 – Gogolin, site 7; 8 – Krzywosądz, site 3; 9, 10, 12, 19, 26 – Toruń, site 243; 13-17, 21, 25 – Smarglin, site 53; 18 – Smarglin, site 51; 20, 24 – Krusza Zamkowa, site 3; 22, 23 – Potok, site 1. After Bokiniec 1995; Makarowicz / Czebreszuk 1995.

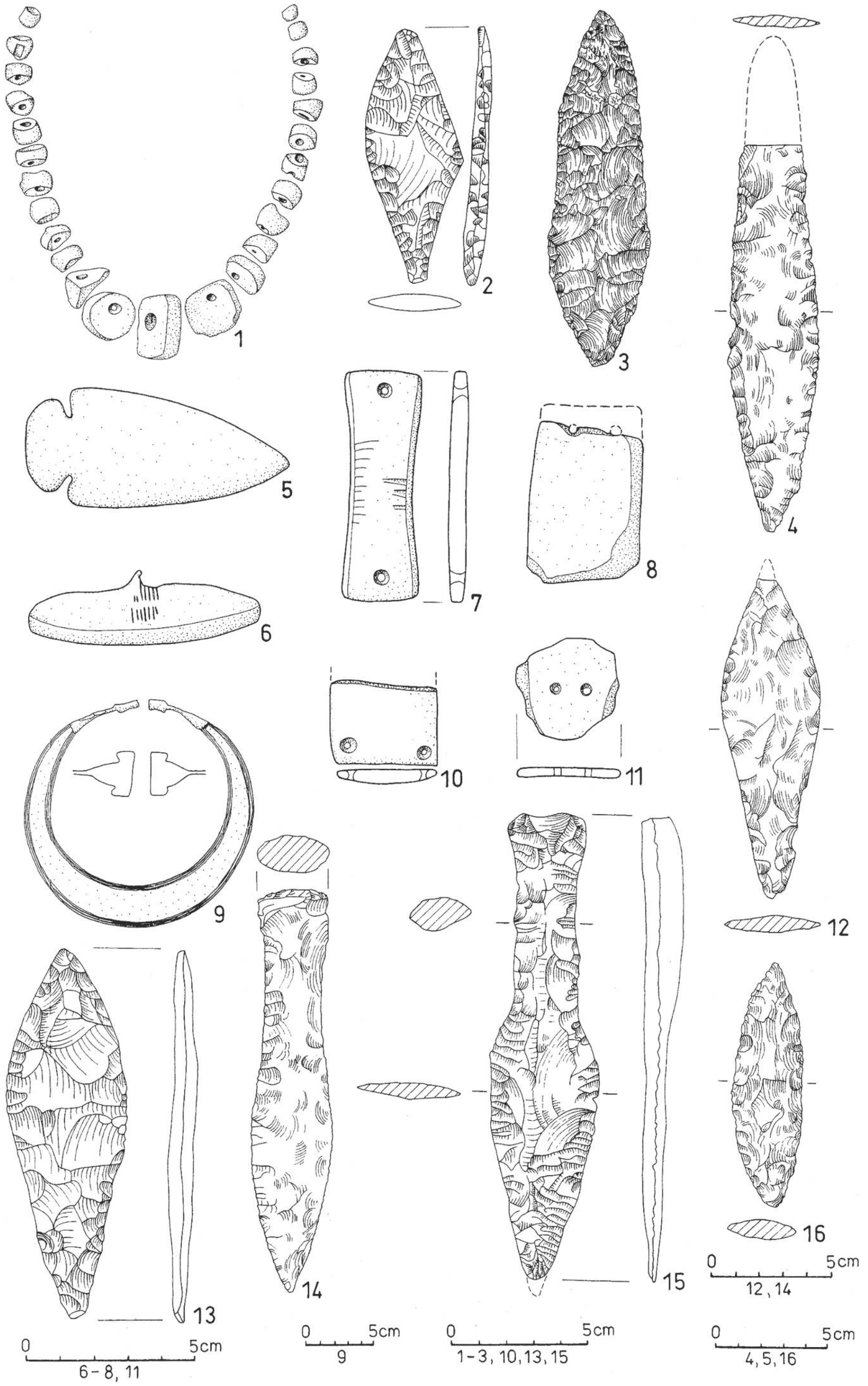
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Fig. 5. Selection of artifacts associated with the North Polish Beakers (mainly from the Iwno Culture and *Oderschnurkeramik* oecumenes or without defined cultural contexts). 1, 3 – Dobre, site 6, grave I; 2 – Krusza Zamkowa, site 3 (settlement); 4 – Kolin; 5 – Kołdrąb (occasional finds); 6 – Wąsosz; 7 – Wąsewo, site 3; 8, 11 – Złotów, site 2; 9 – Malbork; 10 – Kruszwica, site 4; 12 – Grędziec?; 13 – Gmurowo; 14 – Karsko; 15 – Kolbudy; 16 – Koszewo. 1-3, 5, 6, 10 – Kujawy; 6 – Pałuki; 8, 11 – Krajna; 4, 12-16 – Pomerania. 1 – amber; 2-5, 12-16 – flint; 6, 9 – gold; 7, 8, 10, 11 – stone. After Jażdżewski 1937; Dorka 1939; Sarnowska 1969; Wojciechowski 1976; Kośko 1979; Bokiniec 1995; 1996; Makarowicz / Czebreszuk 1995; Czebreszuk 1998.

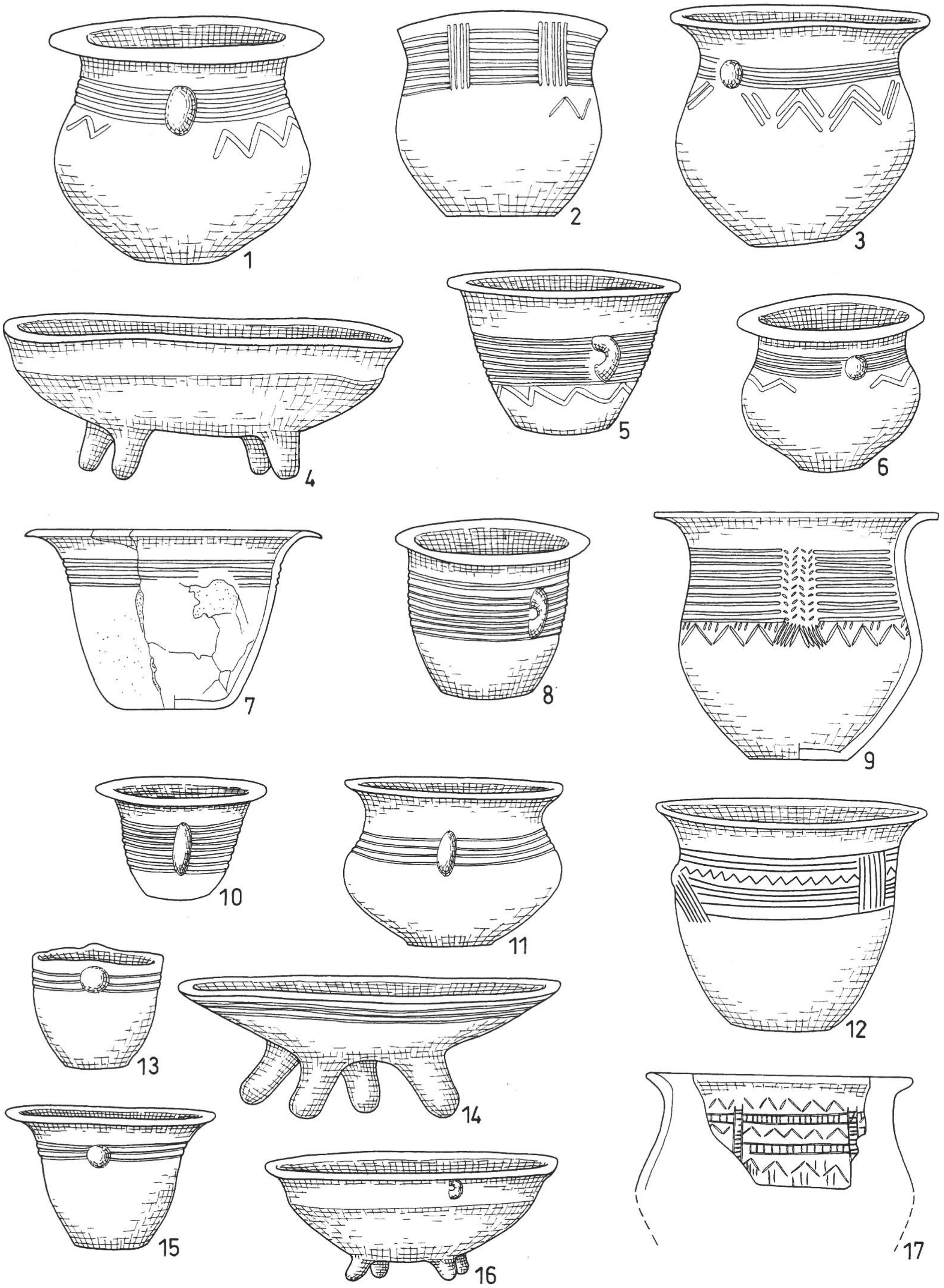

Fig. 6. Selection of Iwno Culture pottery (the middle phase) from northern Poland. 1-16 – from graves; 17 – from a settlement. 1, 3-6, 8, 10, 11, 13-16 – Iwno, site 2; 2 – Gąsawa; 7 – Strzelce, site 2, barrow 2; 9 – Opoki, site 7; 12 – Baranowo. 1, 2-5, 8, 10, 11, 13--16 – Pałuki; 7, 9, 12 – Kujawy (different scales). After Sarnowska 1969; Czebreszuk 1996; Makarowicz 1998.

Outside of Iwno Culture structures, some Bell Beaker traits are encountered in the *Oderschnurkeramik* in western Pomerania, in particular in the lower Oder drainage *(*Schroeder 1951; see also: Kunkel 1931; Eggers 1969*)*. Among them are toothed-stamp ornaments, incised zone-metopic ornaments, bell beakers, wristguards (only west of the Oder) and flint daggers (Fig. 5: 4, 12-16).

The first Iwno Culture phase can be synchronized with Maritime and Epi-maritime beakers and the beginnings of zone-metopic beakers as well as beakers of the Myrhøj type and dated at ca. 2500-2250/2200 BC. The second can be synchronized with zone-metopic and Veluwe beakers, Myrhøj type beakers and the beginnings of Barbed Wire beakers as well as the younger phase of the Bohemian and Moravian Bell Beaker group and dated between 2250 and 2000 BC. The third phase may be called "post-beaker", although some transformed Beaker traits are observable there as well. This is particularly clearly seen in vessel ceramics and some metal artifacts (e.g. a gold Irish-type earring – Fig. 5:6). Beaker reminiscences – only in ceramics – are present in the early phase of the Trzciniec Complex (1950/1900-1750 BC) which was partially contemporaneous with and genetically related to the late Iwno Culture (Makarowicz 1998).

Settlements

Most likely, the Iwno Culture settlements operated for a short period; they were single- or several-season structures and occupied an area of 800-2000 sq. m (Makarowicz 1998, 220ff). Typical of such settlements are light, seasonal post-made structures of shelter character and – in one case – sunken-floor house. Single-house hamlets occurred very often. The size of these homesteads (ca. 20 sq. m like in Smarglin, site 22, Kujawy – Czebreszuk 1996, 120ff) suggests that they were inhabited by nuclear families. Most likely, the settlements operated for a short period: they were single- or several-season structures. Only in a few cases can one talk about long-term – multi-phase occupation of a settlement by northern Beakers (e.g. Siniarzewo, site 1, Kujawy). It cannot be ruled out that such a community consisted of 3-4 nuclear families or 1-2 extended families composed of three generations (Makarowicz 1998; 256ff; Makarowicz / Milecka 1999). Economic and settlement-related data present Iwno Culture communities as relatively mobile. The basis of their economy was animal raising, especially cattle-breeding (Makarowicz 1998, 232ff).

So far no traces of Bell Beaker settlements have been discovered in southern Poland. No data on the economy is available, either. It seems that this may be rather a result of Beakers' mobility and the nature of their settlements (short-lived camps with structures that left no traces in the ground) and economy (animal raising?) than gaps in the archaeological exploration of the area in question.

Burial practices and social relations

Settlements are frequently accompanied by cemeteries where a number of graves (family graves?; e.g. Iwno, Kujawy – Brunner 1905) are typically found. The Iwno Culture funerary ritual generally reflects tendencies present in that of Bell Beakers, however, they differ from one another in some details. It must be taken into account, however, that data comes from few graves containing anthropologically defined bodies. Small cemeteries comprising several up to over a dozen graves are typical (Iwno, site 2; Siniarzewo, site 1, both Kujawy). Both tumulus and flat burials are known. In the "beaker" phases, stone-packing graves and stone-timber structures are found (Łysinin, site 1, Pałuki – Fig. 7:5). The dead were buried in the same manner for 700 years: in oval pits, uncremated, usually singly in the flexed position with legs strongly contracted and hands bent at elbows. Graves containing several individuals are found as well, with skeletons occasionally being incomplete (Łojewo, site 4, Kujawy – Fig. 7:2). We know burials of both adults, male and female, and children. Women were placed on either right or left side with the head pointing N or S and facing E (Fig. 7:1, 5). In a single, anthropologically defined case, a man lay on his right side with the head pointing S and facing E (Żegotki, site 3 – Fig. 7:6). In the existing cases no major differences can be observed in furnishing with grave goods that should point to a particular treatment of one of the sexes.

It is sometimes believed that the quality and quantity of grave goods buried with the dead in relation to their sex and age can be the basis on which to draw conclusions concerning their position in the social structure. Grave-goods in the "beaker" phases of the Iwno Culture are relatively meagre. They usually comprise two to three vessels, rare flint goods (e.g. daggers), bone pins, amber ornaments (e.g. a necklace from Dobre, site 6 – Fig. 6:1) or stone querns and grinders. No graves with wristguards, copper daggers or V-perforated buttons were found. Other Bell Beaker indicators come from contextless finds (wristguards, flint daggers, a lunula). In the late Iwno Culture, graves

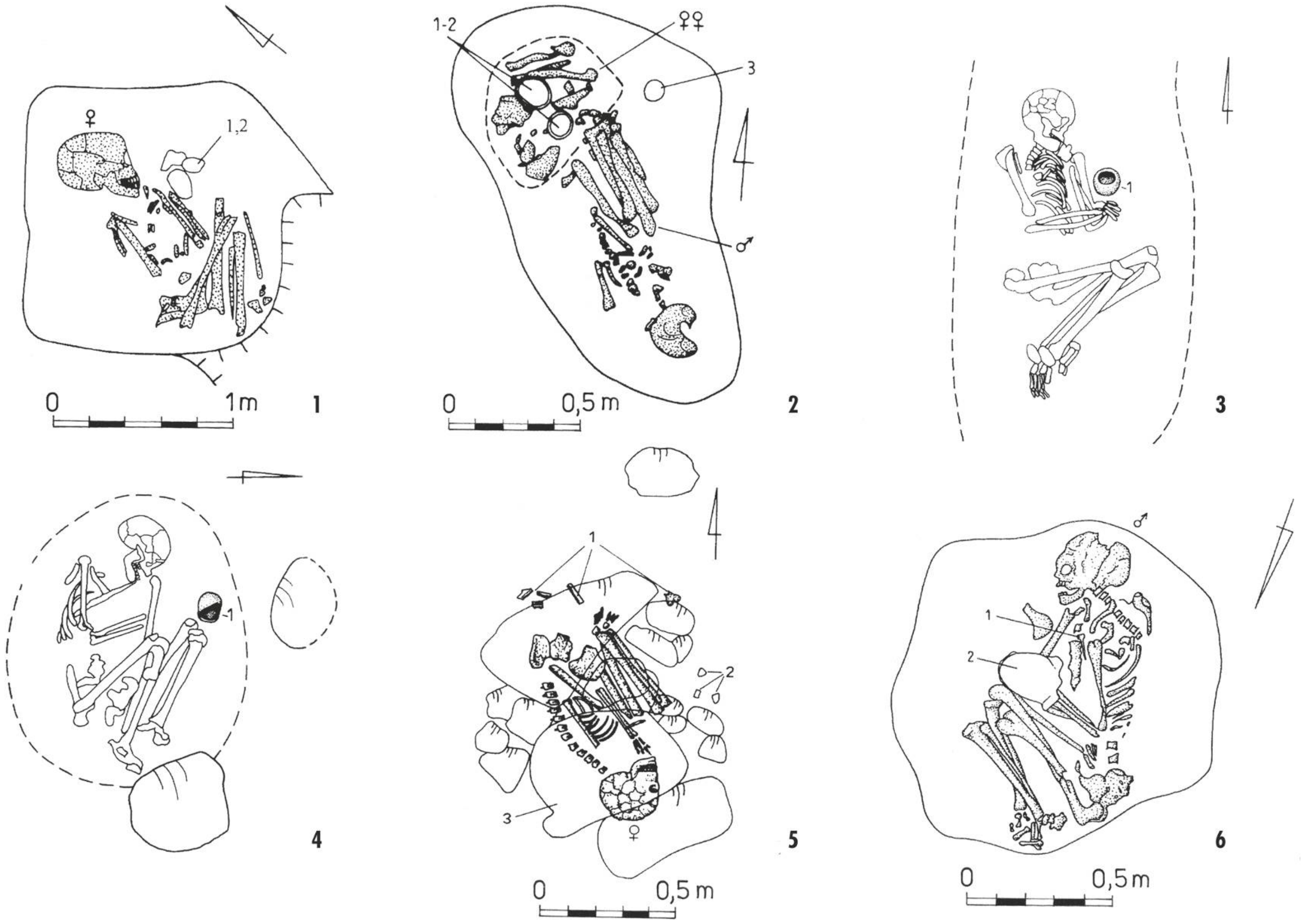

Fig. 7. Examples of the Bell Beaker (Iwno Culture) funerary ritual from northern Poland. 1 – Siniarzewo, site 1: 1, 2 – pottery; 2 – Łojewo, site 4: 1, 2 – pottery; 3 – stone grinder; 3 – Dobre, site 6, grave XVIII: 1 – pottery; 4 – Dobre, site 6, grave V: 1 – pottery; 5 – Łysinin: 1 – animal bones; 2 – stone quern; 3 – pottery. 6 – Żegotki, site 3: 1 – bone pin; 2 – pottery; 3, 4 – without scales. After Jażdżewski 1937; Kośko 1993; Makarowicz 1998.

begin to show amber and bronze objects, the second one related to the impact of Únětice metallurgical centers. The wealth of grave goods in the Iwno Culture "beaker" phases, measured on a point scale[1], gets from two to seven points (average 5), while in the late ("post-beaker") phase it grows at times to over thirty points (average 10 points; e.g. Brusy, Pomerania, 40 points, Śmiardowo Krajeńskie, Krajna region, grave 30 – 37 points). In Łysinin, Pałuki region, in a grave of a woman in the maturus age (Iwno Culture, middle phase) there were placed four vessels (mortar-shaped beakers and a bowl) and a stone quern (7 points). A iuvenis age woman from Siniarzewo, Kujawy (Iwno Culture, middle phase) was furnished with only two bowls (2 points). In the grave of a man in the *senilis* age from Żegotki (Iwno Culture, last phase), Kujawy, a vase and a bone pin were placed (5 points). An important social change "measured" by this method – development of ranking from minimal to moderate – took place, therefore, in the early 2nd millennium BC (Makarowicz 2003). This is borne out by the emergence of hoarding, which must have been related to intergroup competition. One of the hoards (Wąsosz, Pałuki), next to goods made in Únětice style, contained a gold Irish earring (Fig. 5:6) with parallels to beaker objects of this type (Kinnes 1994) and amber beads (Knapowska-Mikołajczykowa 1957).

Communities of southern Polish Bell Beakers are known from over 30 sites (cemeteries, single graves and chance discoveries) (Fig. 1). Due to lack of examined settlements in the region, the estimated size of Beaker groups can only roughly be assessed based on the size of cemeteries whose number of graves ranges from a few (e.g. Samborzec – 10, Złota – 7 and Beradź – 3, all Little Poland) to more than a dozen. The largest burial place in Pietrowice Wielkie, Upper Silesia, consisted of 15 graves (Bukowska-Gedigowa 1965).

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[1] The following grading scale was adopted: 1 kind of raw material – 0 pt, 2 kinds of raw material – 2 pts, 3 kinds of raw material – 3 pts etc; objects made of: clay – 1-3 pts, stone – 1--5 pts, flint – 1-5 pts, bone – 1-5 pts, metal – 3-10 pts, amber – 3-10 pts (grading depends on type of object). Copper and bronze scrap was graded lower than complete objects.

Such information points to the scarcity of Bell Beakers in the enclave and their low demographic potential, smaller than "Iwno" society of the Lowlands. It appears that it was also in this case that communities were established by 1-2 nuclear families or their unions, which used one cemetery. This data agrees with opinions on the size of Beaker groups and their mobile lifestyle generally accepted in Central European literature (e.g. SHENNAN 1986, 142ff; KOŚKO 1979; MACHNIK 1979; HARRISON 1980; CZARNETZKI 1984; MAKAROWICZ / CZEBRESZUK 1995; CZEBRESZUK 1998; VANDKILDE 1996; 2001; MAKAROWICZ 1998; CZEBRESZUK / SZMYT 2001).

In graves, from one to ten vessels were placed, on the average 2.8 per grave. Inventories are dominated by *Begleitkeramik*[2] , mostly one handled jugs and cups, conical and hemispherical bowls supported by legs as well as undecorated and decorated beakers with one handle (Fig. 8 and Fig. 9). Only in Silesia (Wrocław-Wojszyce and Pietrowice Wielkie), two bell beakers were found with a zone ornament made with a toothed stamp (Fig. 8:2, 4). The majority of pots were undecorated (WOJCIECHOWSKI 1987, 689; MACHNIK 1979; 1987).

Ten vessels were recorded in grave 1 in Beradź, Little Poland, next to an individual of indefinite sex (ŻUROWSKI 1932). In 15 graves from Pietrowice Wielkie, Upper Silesia (BUKOWSKA-GEDIGOWA 1965), from one to six vessels were recorded, 47 in all, giving an average of 3.1 vessels per grave. Due to the decomposition of skeletons, there is no data on sex and age of the dead from this cemetery. In female graves, one to four vessels (cups, jugs and bowls) were placed, on the average 2.25 containers per one person. Occasionally, other objects were found (Fig. 10), mainly ornaments such as V-perforated buttons made of bone (Złota, graves 374, 379 and 381, and Sandomierz, site Wzgórze Zawichojskie, both Little Poland – Fig. 10:26–38, 41, 42) and amber (Strachów, Lower Silesia – Fig. 10:15–24), a copper awl (Sandomierz, Little Poland – Fig. 10:43) and pendants made of bone (Fig. 10:12, 13). Fragments of copper diadems were found in a female grave in the cemetery in Złota (grave 386 – Fig. 10:5) and in a mature man's grave in the cemetery in Samborzec (grave 9). With the male dead (anthropologically determined), one to three vessels were placed (cup, bowl, jug), on the average 2.4 vessels per person. Apart from vessels, men's graves contain mainly military accessories: wristguards, arrowshaft smoothers, arrowheads (Fig. 10:1–4, 6–8, 9, 10, 29–32), a copper dagger in one case (Fig. 10:11) and ornaments like pendants, e.g. decorated pendants imitating a bow made of a boar's tusk (Fig. 10:25). Prestigious ornamented beakers and one-handle beakers (cups), which were perhaps used during libational rituals, are not very frequent in this enclave of Bell Beakers; they are mainly found in men's graves from Silesia (Wrocław-Wojszyce and Pietrowice Wielkie – Fig. 8:2, 4) and Little Poland (Beradź – Fig. 9:4, 7, 11), and only in one case, in a woman's (Strachów – Fig. 8:1). Flint goods are found in graves of men and children, probably of the male sex. A single flint axe was found in Złota (Fig. 10:44), in a grave (376) of an infant.

In the drainage basins of the upper Vistula and Oder rivers, the dead were buried according to the Bell Beaker ritual (Fig. 11). Only individual graves have been found in the region. Members of both sexes as well as children were buried. No mounds over usually oval grave pits were found, which can be, however, an effect of deep ploughing on fertile loess soils. Inhumations were dominant, only in grave 6a in Złota, charred bones were found (ŻUROWSKI 1932, 123; HARRISON 1980, 61). The dead were buried in the flexed position with legs contracted and arms bent at elbows. Women were placed on their right side, head pointing S and facing E (Fig. 1, 3, 5). Men were placed on their left side, head pointing N and facing E (Fig. 11:2, 4). Exceptions are a grave of a senile individual in Wierzbno and grave 3 from Samborzec (KAMIEŃSKA / KULCZYCKA-LECIEJEWICZOWA 1970, 376) in which a male of about 50-60 years was buried supine with legs bent like those of a frog (Fig. 11:2). Both individuals were oriented along the N-S axis with heads pointing N and facing E. In grave 88 in Żerniki Górne, a mature man was buried with his head pointing NW-SE and facing E (KEMPISTY 1978, 396). Children must have been inhumed, depending on their sex, on their left or right side, along the N-S axis and facing E. A high percentage of buried children has been observed. In Samborzec, out of nine anthropologically identified graves, three belonged to children, four to men, and two to women; in Złota, out of five identified graves, three belonged to children, one to a man and one to a woman.

Of 54 graves uncovered in Bell Beaker cemeteries, only 16 crossed the threshold of 10 pts, 4 exceeded 20 pts, and 2 – 30 pts (MAKAROWICZ 2003). Practically speaking, none of the 15 graves of the largest

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[2] The term *Begleitkeramik* I use both for undecorated pottery found in a Bell Beaker context (common ware) and pottery of the regional tradition, coming also from the local context – "regional substratum" (Categories II and III according to M. Besse and Ch. Strahm – BESSE / STRAHM 2001, 108).

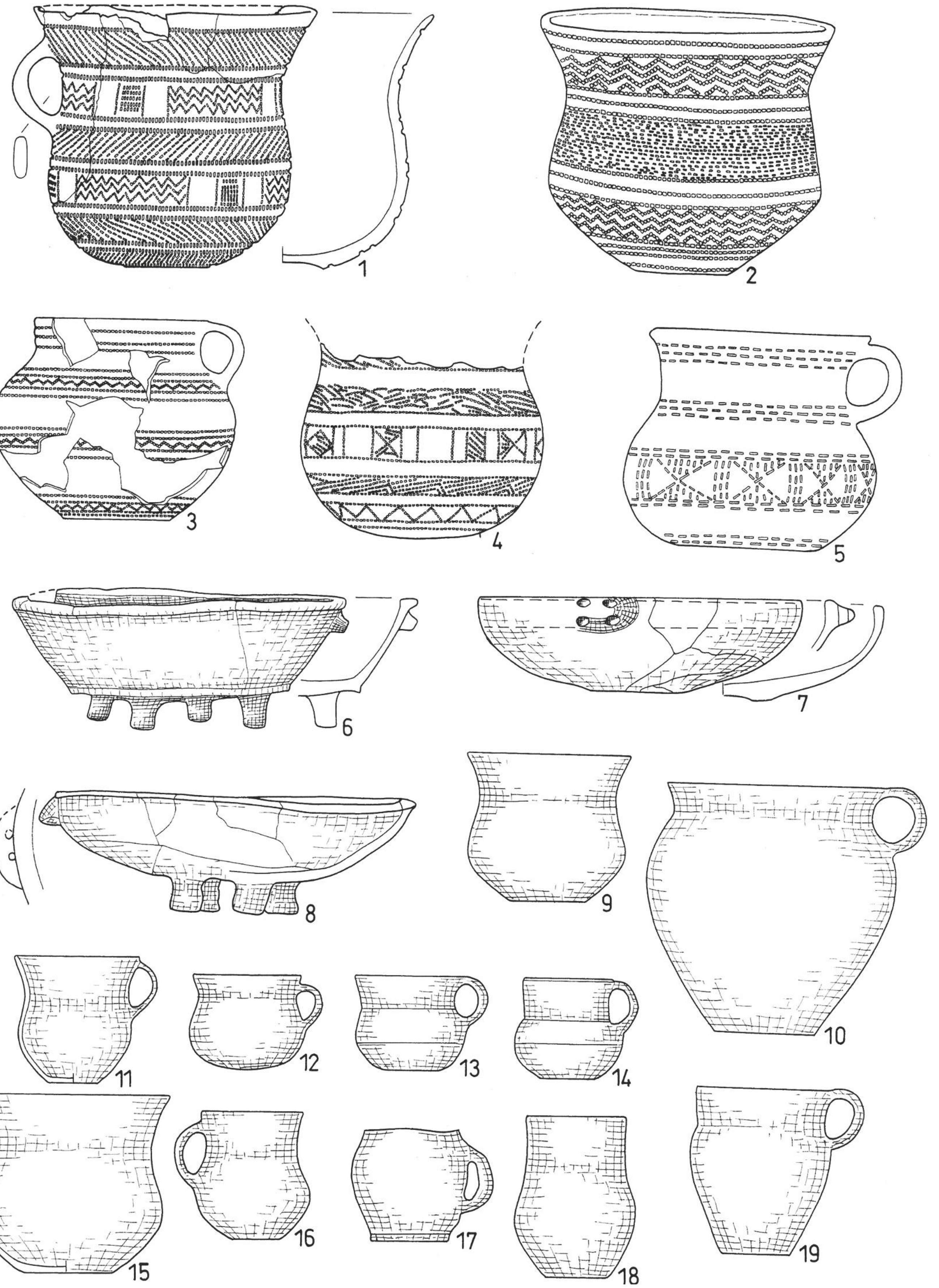

Fig. 8. Selection of Bell Beaker pottery from Upper Silesia (1, 3, 4, 7-19) and Lower Silesia (2, 5, 6). 1 – Strachów; 2 – Wrocław-Oporów; 3, 4, 7-19 – Pietrowice Wielkie (3, 4, 8, 13 – grave IX; 7, 10, 12, 19 – grave XIII; 9, 11 – grave IV; 14, 17 – grave X; 15, 16 – grave XI; 18 – grave XIV); 5 – Opatowice; 6 – Żerniki Wielkie, site 1 (different scales). After Bukowska-Gedigowa 1965; Wojciechowski 1972; Noworyta 1976.

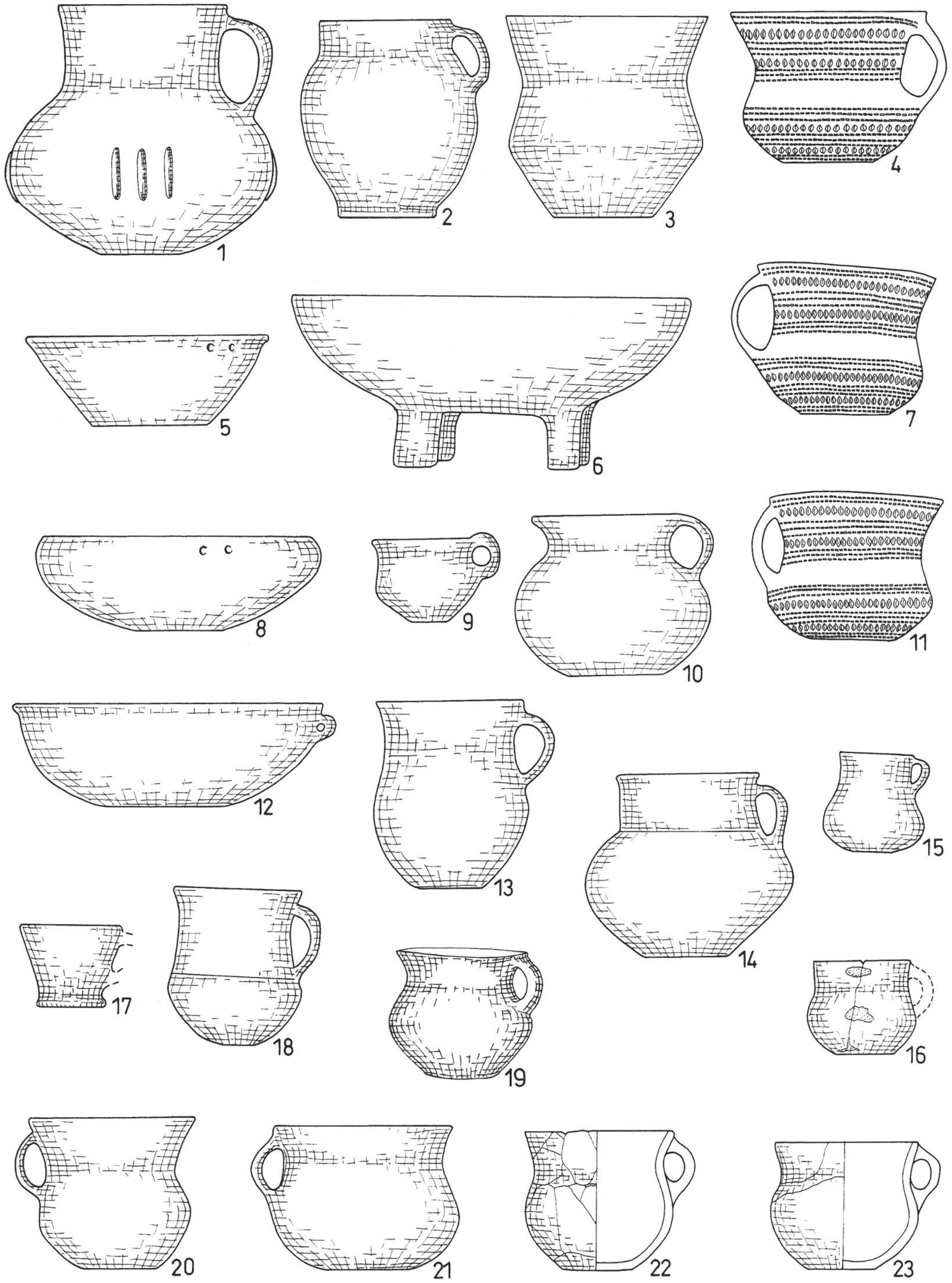

Fig. 9. Selection of Bell Beaker pottery from Little Poland. 1, 2, 5, 6, 12, 14 – Samborzec (1, 2, 15, 16 – grave 6; 5 – grave 1; 6, 14 – grave 3; 12 – grave 2); 4, 7, 10, 11, 19, 21 – Beradź (4, 7, 11, 19 – grave I; 10, 21 – grave V); 8, 20 – Święcice, grave 2; 9, 13, 17, 18 – Złota (9 – grave 386a; 13, 18 – grave 381; 17 – grave 379); 22, 23 – Sandomierz, site Wzgórze Zawichojskie (different scales). After Żurowski 1932; Kamieńska / Kulczycka-Leciejewiczowa 1970; Machnik 1979; 1987; Włodarczak / Kowalewska-Marszałek 1998.

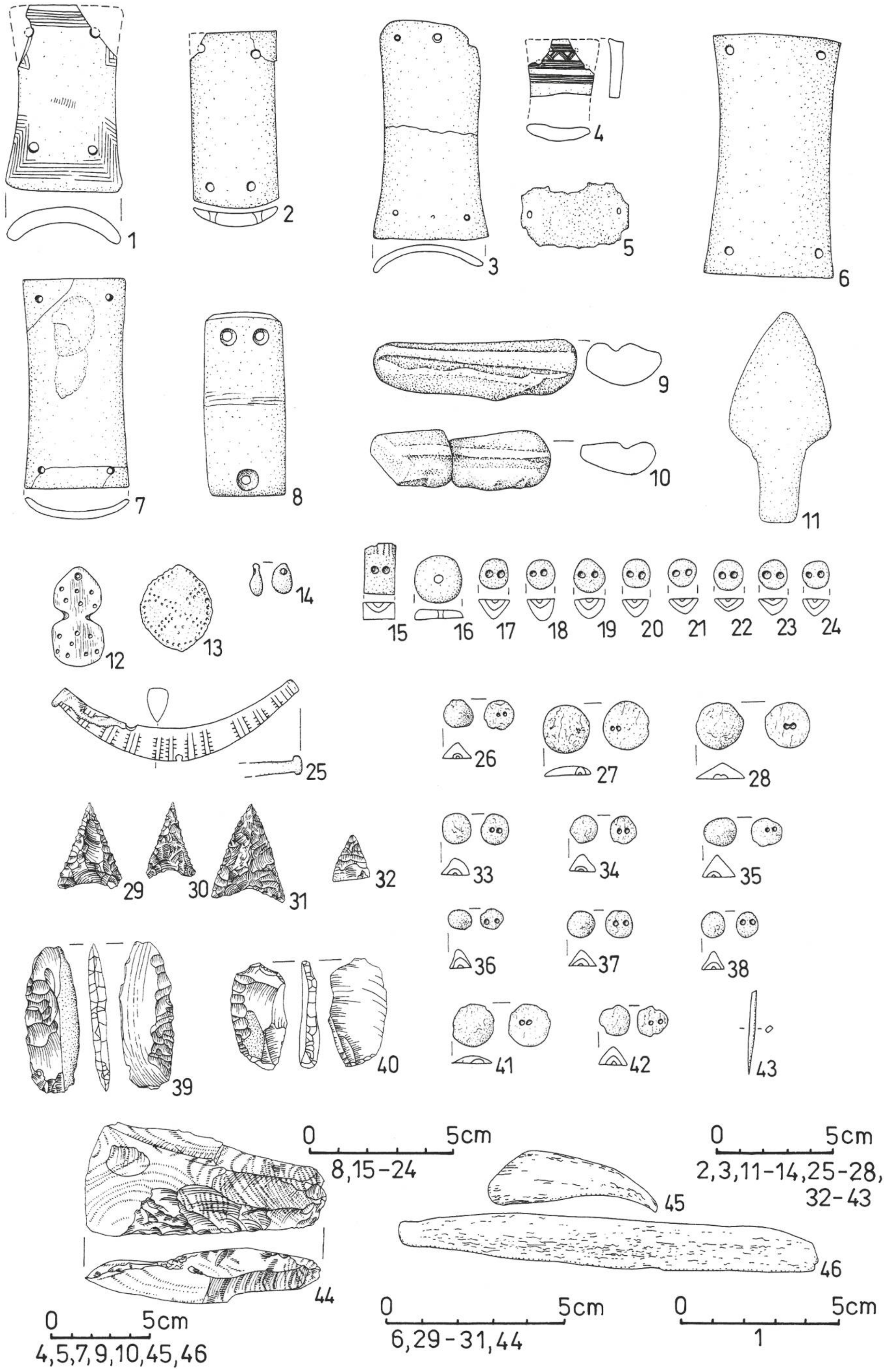
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Fig. 10. Selection of artifacts associated with the South Polish Beakers (materials from graves). 1 – Wrocław-Oporów; 2, 11, 25, 32, 39, 40, 45, 46 – Samborzec, grave 3; 3 – Świniary Stare; 4 – Beszowa; 5, 14 – Złota, grave 379; 6 – Beradź, grave V; 7 – Złota, grave 386; 8 – vicinity of Milicz; 9, 10 – Beradź, grave V; 12, 13 – Złota, grave 374; 15-24 – Strachów; 26-28, 33-38, 41-43 – Sandomierz, site Wzgórze Zawichojskie; 29-31 – Wierzbno; 44 – Złota, grave 376. 1, 8, 29-31 – Lower Silesia; 15-24 – Upper Silesia; 2-7, 9-14, 25-28, 32-46 – Little Poland. 1-4, 6-10 – stone; 5, 11, 43 – copper; 12-14, 16-28, 33-38, 41, 42, 45, 46 – bone; 15, 16 – amber; 29-32; 39, 40, 44 – flint. After Żurowski 1932; Seger 1934; Krauss 1964; Kamieńska / Kulczycka-Leciejewiczowa 1970; Wojciechowski 1972; Noworyta 1976; Włodarczak / Kowalewska-Marszałek 1998.

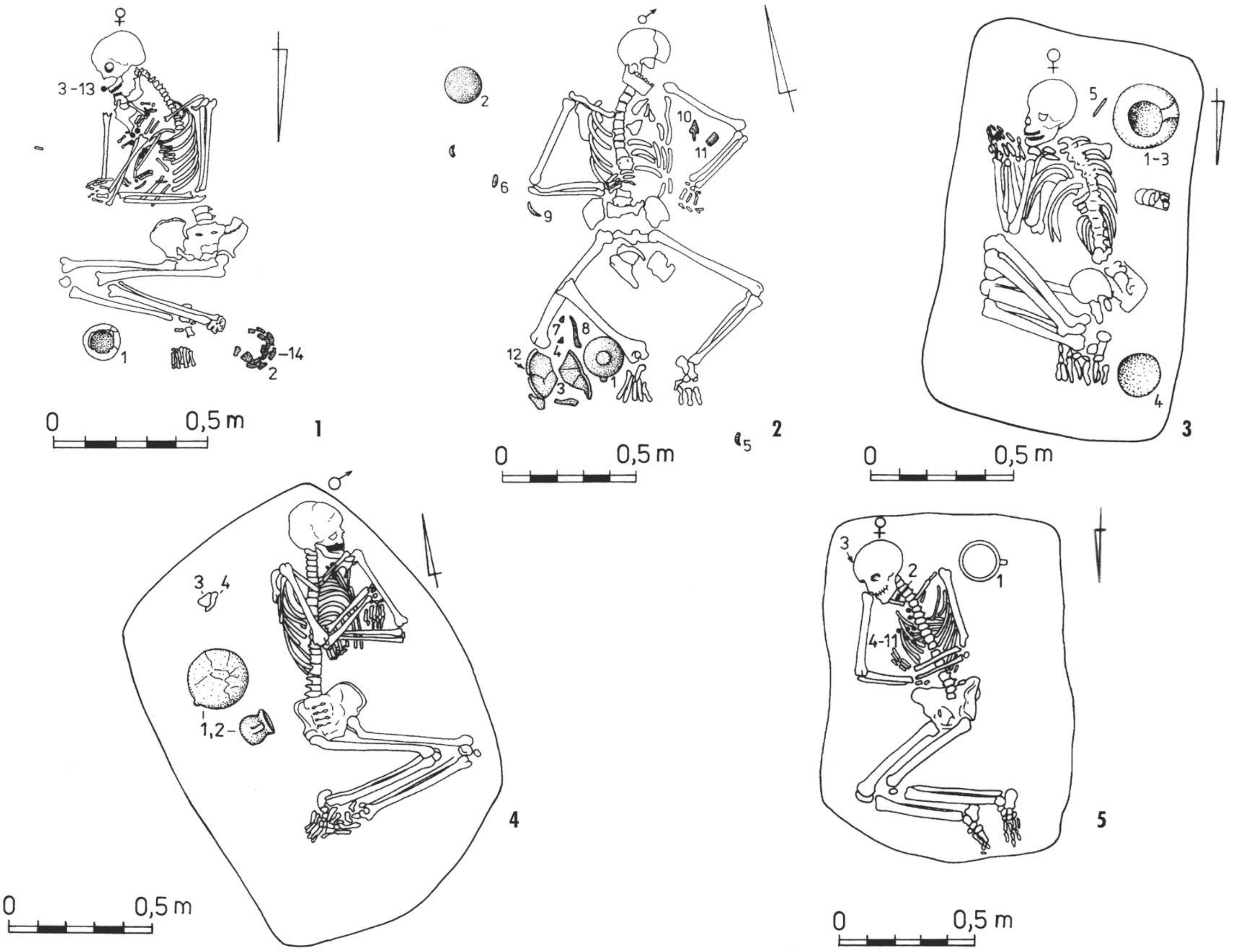

Fig. 11. Examples of the Bell Beaker funerary ritual from southern Poland. 1 – Sandomierz, site Wzgórze Zawichojskie: 1, 2 – pottery; 3--13 –V-perforated bone buttons; 14 – copper awl; 2 – Samborzec, grave 3: 1-3 – pottery; 4 – arrowhead; 5 – boar's tusk; 6, 7, 12 – flint artifacts 8 – bone artifact; 9 – model of bow made of boar's tusk; 10 – copper spearhead; 11 – wristguard; 3 – Samborzec, grave 6: 1-4 - pottery; 4 – Samborzec, grave 7: 1, 2 – pottery; 3 – flint artifact; 4 – flint dagger; 5 – Strachów: 1 – pottery; 2 –V-perforated amber button; 3 – amber pendant; 4-11 – V-perforated bone buttons. After Kamieńska / Kulczycka-Leciejewiczowa 1970; Noworyta 1976; Machnik 1979; 1987; Włodarczak / Kowalewska-Marszałek 1998; Budziszewski / Haduch / Włodarczak 2003.

necropolis in Pietrowice Wielkie, Upper Silesia, exceeded the 9 pts mark on the richness scale. The richest were graves of men of *senilis* and *maturus* age groups. Of particular interest are: grave 3 in Beradź (39 pts), grave 3 (the so-called warrior's grave) in Samborzec (35 pts), both Little Poland, the slightly less rich graves of adult women, e.g. Strachów, Lower Silesia (24 pts), and Sandomierz (19 pts) and Złota, grave 4 (17 pts), both Little Poland. Women's graves are in general more diversified in this respect and one often finds among them relatively poorly furnished instances (e.g. Samborzec, graves 6 and 8 – women of *maturus* and *adultus/maturus* age groups – 4 pts ea.). Graves of children were also scantily furnished (e.g. Złota, grave 3 – 1 pt, grave 6 – 3 pts; Samborzec, grave 1 – 2 pts, graves 2 and 4 – 3 pts ea., all of infans II age group; Żerniki Górne, Little Poland, grave 1 – 3 pts). The average wealth score of all Bell Beaker graves in Little Poland and Silesia is 6.7 pts. In the case of men, it is 15 pts, women 11.7 and children 3.7 pts.

The quoted data points to a certain inequality in the Bell Beaker community of upper basins of the Oder and the Vistula as well as rather moderate forms of ranking, whose participants were mostly men. The social position of women and – particularly so – children can be described as marginal. In all probability, the analysed communities were also organised along principles characteristic of kinship-based units (Makarowicz 2003).

In the case of southern Polish Bell Beaker enclaves, it is difficult to plausibly distinguish at present any phases in their development, although such attempts have been made which led to the distinguishing of two stages (Wojciechowski 1972; Kadrow 2001). However, neither the character of sources (small family cemeteries that could have been used only by one or two generations, the presence of older and younger elements in pottery from specific assemblages), nor a small number of radiocarbon dates support the distinction. Generally speaking, the materials from Silesia and Little Poland represent a younger development horizon of central European Bell Beakers, in particular, the late stage of the Bohemian-Moravian group and the Csepel group in the Danube drainage basin (Wojciechowski 1987, 61).

Interactions

Interactions of Iwno Culture communities with other groups were very intense. Apart from parallel transmission of cultural patterns and transfer of people within the North European Bell Beaker Province, and “the world of the late Northern Neolithic” in general (late Globular Amphora Culture, late Single Grave Culture, epi-Corded Ware Culture communities), contacts with the Únětice world along the North – South and North – South-West axes gain importance at the end of the 3rd millennium (Czebreszuk 2001). These mainly consisted in exchange of exotic objects made of Baltic amber, which was obtained directly or indirectly by members of the Iwno Culture in return for items of bronze and gold from the area of the Únětice Culture). They played an important role in the social life of the lowland Bell Beakers (Kośko 1979). According to some approaches, a role stimulating the operation of the entire cultural system. They were prestigious objects used by the community and individuals in rituals aimed at winning and maintaining power, communicating high status, and confirming prestige.

Populations of southern Beakers sometimes interacted with communities of the late Corded Ware Culture (ca. 2400 / 2200 BC – Włodarczak / Kowalewska-Marszałek 1998), similar in social organisation (a model, in which men – warriors dominate). The role played by the Beakers is also stressed in the establishment of social structures of the proto-Mierzanowice Culture in Little Poland (Kadrow 1995; 2001) as well as the proto-Únětice Culture in Silesia. Bell Beaker populations were characterised by their mobility. Anthropological analyses carried out in Little Poland show differences between male skeletons and those of members of local populations. It were only female skeletons that exhibited local characteristics (Machnik 1987, 141; Budziszewski / Haduch / Włodarczak 2003). These observations are consistent with opinions, severely criticised in the 1980s, considering Bell Beakers a “male culture”, which was also supposed to account for its mobility. In their ritual life the discussed communities used varied items of prestige made of exotic materials, non-existent in those areas. This is a proof of the vast contacts of Beaker members and intense exchange with communities that had access to them (see: Waldren / Kennard 1987).

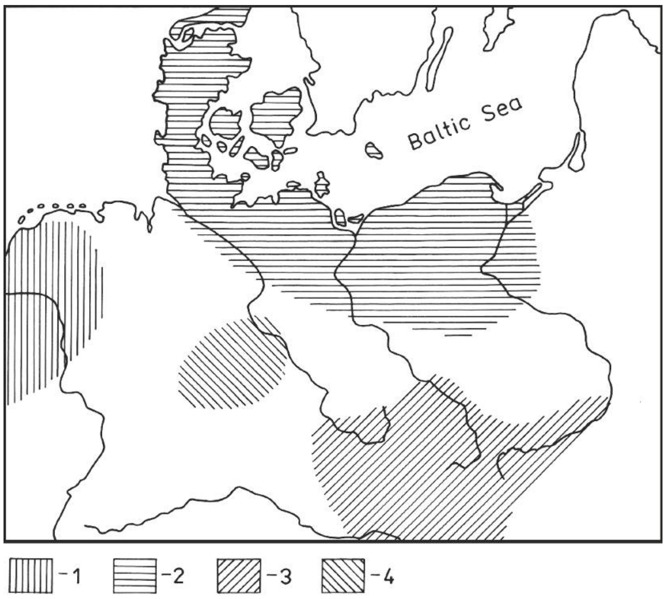

Fig. 12. Bell Beakers in the Vistula and Oder drainages against the background of the main Beaker enclaves in west-central Europe. 1 – Lower Rhine enclave; 2 – North-eastern enclave (including North Polish Bell Beakers); 3 – Enclave stretching between the Middle Danube, Upper Vistula/Oder and Upper Elbe (including South Polish Bell Beakers); 4 – Saale enclave. After Czebreszuk 2001 and Czebreszuk / Szmyt 2001, with amendments.

The lowland Beaker enclave was part of the north European cultural province stretching from western Jutland (Myrhøj group – Liversage 1987), across northern Germany as far as Kujawy and mainly formed by syncretic groups of Single Grave Culture and Bell Beakers (Fig. 12:2). The transmission of cultural patterns took place chiefly along parallels in this area, while the presence of the Bell Beaker package could have been an effect of transformations within local, late *Einzelgrabkultur*. One should not exclude, either, a combination of migrations of small groups of people from the west and a gradual transformation of local structures under their impact. The development of the Iwno Culture until ca. 2000 BC follows the general evolution tendencies in the central European northern zone in the second half of the 3rd millennium BC (Fig. 13).

The anthropological dissimilarity of Beaker populations as compared to the Corded Ware Culture and other Late Neolithic groups as well as differences in the sphere of material culture and funerary rituals bring out Bell Beakers strangeness with respect to local societies.

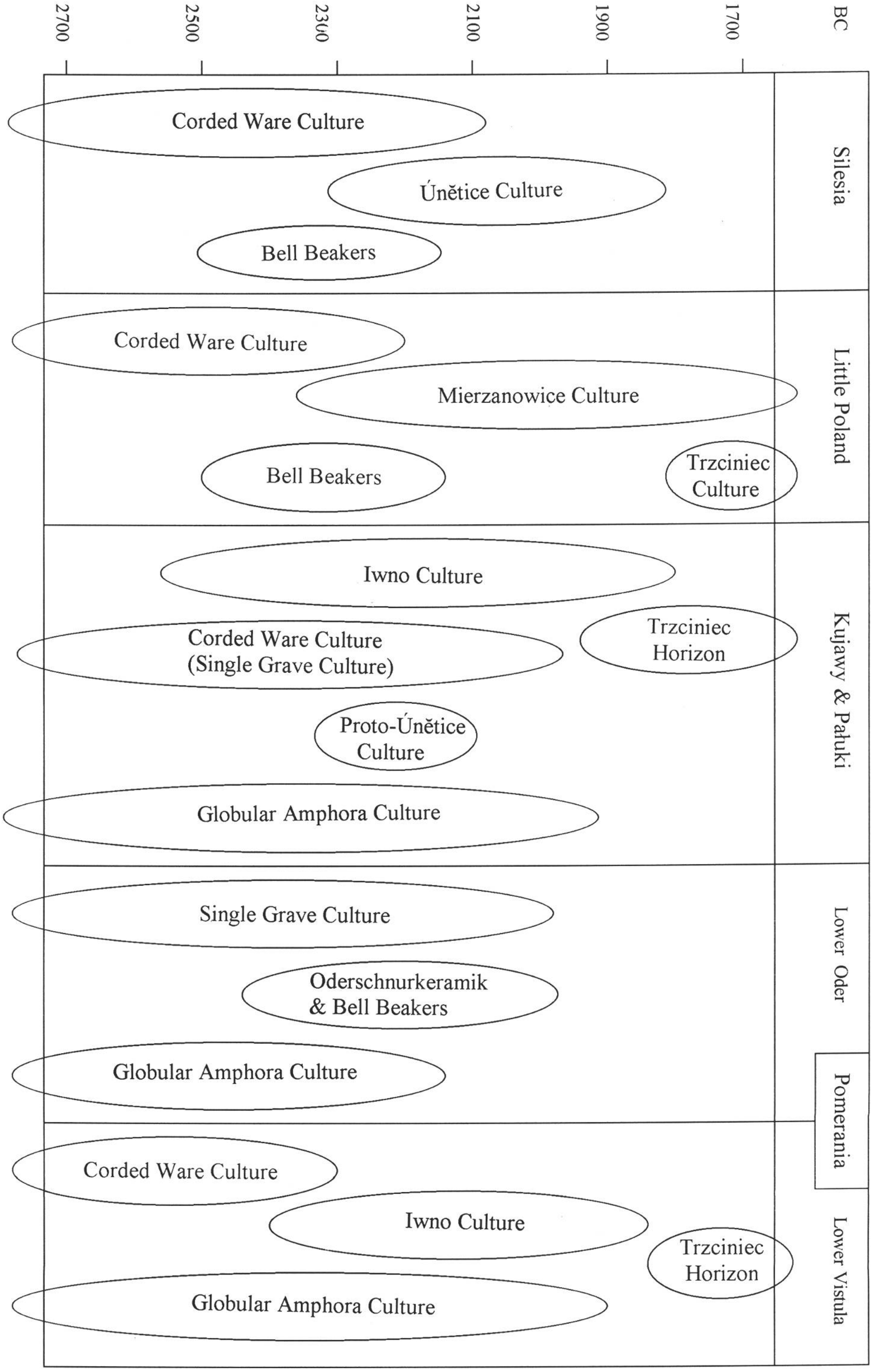

Fig. 13. Chronological sequences of the main cultural units in the area covered by the paper. After Jacobs 1991; Kośko 1991; Bokiniec 1995; Czebreszuk 1996; 2001; Zich 1996; Makarowicz 1998; Kadrow 2001.

An additional argument in favour of the migration theory of Beaker appearance in southern Poland is provided by the contemporary interpretations of the so-called Begleitkeramik (accompanying ware or common ware), recently suggested by Marie Besse and Christian Strahm (Besse / Strahm 2001, 115ff; see also Case 2001). Earlier, vessels of this type had been considered in terms of chronology the last Bell Beaker development stage in central Europe characterized by the presence of undecorated ceramics (Shennan 1976, 133). Regardless whether we treat this kind of ceramics as an assembly of pottery of local non-Beaker cultures, subsequently incorporated by Bell Beakers, or as undecorated Beaker vessels, *Begleitkeramik* is part and parcel of the Bell Beaker cultural package and not something alien in respect of it (Heyd 2001, 393 and 404). Indeed, in southern Poland, it is rather difficult to associate accompanying pottery with local Late Neolithic groups, in particular the Cracow-Sandomierz group of the Corded Ware Culture dominating there (Machnik 1966; Włodarczak 1998). Neither is there any continuity (genetic relationship) between the Corded Ware Culture and Bell Beakers. Beaker "folk" came here from the south, from Bohemia, Moravia and south-western Slovakia. Some scholars go as far as to interpret the southern Polish Bell Beakers enclave as the northernmost frontier of the Csepel group (Fig. 12:3 – Wojciechowski 1987). This must be one of very few (the only?) known regional case where the appearance of Bell Beakers may be related to population migrations. After negotiating mountain passes (a convenient route led through, for instance, the Moravian Gate), they settled near the fertile loess lands of Silesia and Little Poland to participate actively in the rise of the Early Bronze Age there. In Silesia this was the proto-Únětice Culture, in Little Poland – proto-Mierzanowice Culture (Fig. 13).

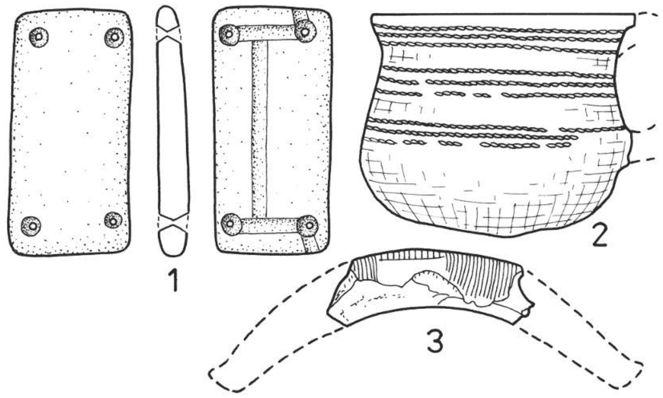

Fig. 14. A grave assemblage of the Proto-Mierzanowice Culture from Kietrz, Upper Silesia, showing the Bell Beaker traits. After Machnik 1987.

In both cases one can distinguish, relying on the typological analysis and absolute dating (Little Poland) relatively long – 100-200 years – horizons of co-existence of the late Bell Beakers and early assemblages of the mentioned groups. Sometimes, assemblages combining traits of both traditions, Bell Beakers and Mierzanowice Culture (Fig 14), and Bell Beakers and Únětice Culture (Fig. 15), are recorded as well.

Conclusion

Both Bell Beaker enclaves in the drainages of the Vistula and Oder rivers, presented here in a brief outline, have much in common but also differ from one another in many respects. Similarities follow mainly from the adaptation of Beaker ideology, whereas differences are a consequence of a different pace of cultural development in the highland and lowland zones and distinct mechanisms of Beaker package assimilation. In Silesia and Little Poland, the emergence of the package was related to the migration of Beaker "folk" of Danube traditions, whereas in the north, the "Beakerization" of the Single Grave Culture was an effect of much

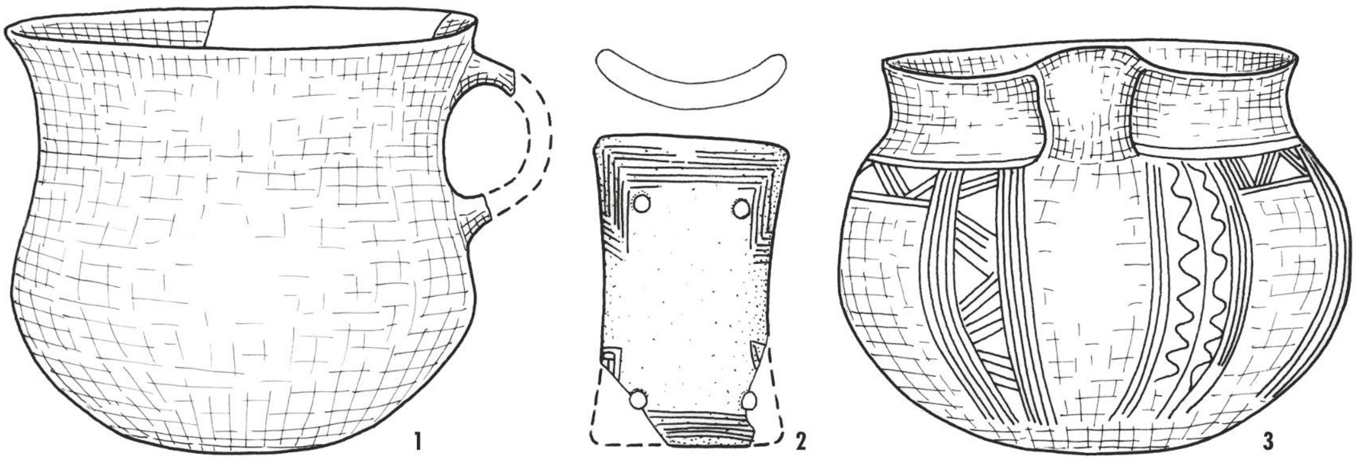

Fig. 15. A grave assemblage of the Proto-Únetice Culture from Wrocław-Oporów showing the Bell Beaker traits. After Seger 1934.

broader processes of cultural syncretization taking place between the lower Elbe and Vistula rivers.

In the southern Polish enclave, Beaker social structures can be interpreted as relatively unstable. This is borne out by the absence of documented settlements, presence of only small cemeteries, scarcity of Bell Beaker sites in this zone and a relatively short-lived nature of their settlement (300 years). Beaker societies must have been there very mobile, which must be related above all to their subsistence (i.e. cattle raising).

In the north, Iwno Culture populations were far more numerous and their settlement more intensive and lasting (700 years). In this area, many settlements have been recorded, although most of them are seasonal structures with a single dwelling-house. Settlements were often accompanied by single graves or cemeteries (only rarely were they lasting). Iwno Culture groups were relatively mobile, subsisting on cattle raising, as well as sheep / goats and – to a small degree – pigs. In addition, one can speak of this society's participation (organization and servicing?) in the distribution of amber and metal among the cultural communities of the Vistula and Oder drainages.

Beaker societies of both enclaves were characterized by moderate ranking, an ideology emphasizing the male element and complex rituals. In the rituals they used a number of prestige objects (more selectively in the north), characteristic of the Beakers in all the provinces. Owing to these traits, Bell Beakers in the Vistula and Oder drainages match the general tendencies of the socio-cultural evolution in central Europe at the decline of the Neolithic.

Acknowledgements

I wish to thank Dr. Piotr Włodarczak and Dr. Janusz Budziszewski for making the data concerning the Bell Beaker cemetery in Samborzec available to me.

References

Besse M. / Strahm Ch. 2001. The components of the Bell Beaker Complex. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, Vol. I, 103–110. Trento.

Blajer W. 1990. *Skarby z wczesnej epoki brązu na ziemiach polskich*. Wrocław - Warszawa - Kraków - Gdańsk - Łódź.

Bokiniec A. 1995. Początki epoki brązu na Pomorzu Wschodnim. Unpublished PhD dissertation. Warszawa.

Brunner K. 1905. Funde von Iwno. *Zeitschrift für Ethnologie* 37, 899–912.

Budziszewski J. / Haduch E. / Włodarczak P. 2003. Bell Beaker Culture in South-eastern Poland. In: Czebreszuk J. / Szmyt M. (eds.), *The Northeast Frontier of Bell Beakers*, this volume.

Bukowska-Gedigowa J. 1965. Cmentarzysko kultury pucharów dzwonowatych w Pietrowicach Wielkich, pow. Racibórz. *Roczniki Muzeum Górnośląskiego w Bytomiu* 3, 41–65.

Case H. 2001. The Beaker Culture in Britain and Ireland: Groups, European Contacts and Chronology. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, Vol. I, 361–377. Trento.

Czarnetzki A. 1984. The Genetic Influence of Bell Beaker people in Bohemie. In: Guilaine J. (ed.), *L'age du Cuivre Européen. Civilisations a Vases Campaniformes*, 121–128. Paris.

Czebreszuk J. 1996. *Społeczności Kujaw w początkach epoki brązu*. Poznań.

Czebreszuk J. 1998. The North-Eastern Borderland of the Bell Beakers. The Case of the Polish Lowland. In: Benz M. / Van Willigen S. (eds.), *Some New Approaches to the Bell Beaker „Phenomenon". Lost Paradise ...?* British Archaeological Report, International Series 690, 161–178. Oxford.

Czebreszuk J. 2001. *Schyłek neolitu i początki epoki brązu w strefie południowo-zachodniobałtyckiej (III i początki II tys. przed Chr.). Alternatywny model kultury*. Poznań.

Czebreszuk J. / Szmyt M. 2001. The Bell Beaker influences on the North European Plain. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, Vol. II, 459–470. Trento.

Eggers H.J. 1969. *Pommersche Funde und Ausgrabungen aus den 30er und 40er Jahren*. Hamburg.

Harrison R.J. 1980. *The Beaker Folk. Copper Age Archaeology in Wester Europe*. London.

Heyd V. 2001. On the earliest Bell Beakers along the Danube. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, Vol. II, 387–409. Trento.

Jacobs J. 1991. *Die Einzelgrabkultur in Mecklenburg - Vorpommern*. Schwerin.

Jażdżewski K. 1937. Ślady kultury pucharów dzwonowatych na Kujawach. *Z otchłani wieków* 12, 83–94.

Kadrow S. 1995. *Gospodarka i społeczeństwo. Wczesny okres epoki brązu w Małopolsce*. Kraków.

Kadrow S. 2001. *Gospodarka i społeczeństwo wczesnego okresu epoki brązu w Europie Środkowej*. Kraków.

Kalicz-Schreiber R. / Kalicz N. 2001. Were the Bell Beaker as Social Indicators of the Early Bronze Age in Budapest? In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, Vol. II, 439–457. Trento.

Kamieńska J. / Kulczycka-Leciejewiczowa A. 1964. Quelques remarques sur la civilisation des vases campaniformes en Pologne. *Archaeologia Polona* 7, 96–113.

Kamieńska J. / Kulczycka-Leciejewiczowa A. 1970. The Bell Beaker Culture. In: Wiślański T. (ed.), *The Neolithic in Poland*, 366–383. Wrocław - Warszawa - Kraków.

Kempisty A. 1978. *Schyłek neolitu i początek epoki brązu na Wyżynie Małopolskiej w świetle badań nad kopcami*. Warszawa.

Kinnes I.A. (ed.), 1985. *British Bronze Age Metalwork. A7-16 Beaker and Early Bronze Age Grave Groups*. London.

Knapowska-Mikołajczykowa A. 1957. Wczesny okres brązu w Wielkopolsce. *Fontes Archaeologici Posnanienses* 7, 31–111.

Kośko A. 1979. *Rozwój kulturowy społeczeństw Kujaw w okresach schyłkowego neolitu i wczesnej epoki brązu*. Poznań.

Kośko A. 1991. *Ze studiów nad kujawską enklawą naddunajskiej cywilizacji wczesnobrązowej. Cmentarzysko grupy Dobre w Bożejewicach, woj. Bydgoszcz, stanowisko 8*. Poznań - Inowrocław.

Kośko A. 1993. Z badań nad udziałem tradycji kultury amfor kulistych w sferze światopoglądowo-obrzędowej społeczeństw kultury iwieńskiej. In: Różnowski F. (ed.), *Miscellanea archaeologica Thaddaeo Malinowski dedicata*, 215–223. Poznań - Słupsk.

Krauss A. 1964. Grób kultury pucharów odkryty w 1959 r. w Świniarach Starych, pow. Sandomierz. In: Nosek S. (ed.), *Studia i materiały do badań nad neolitem Małopolski*, 411–415. Wrocław - Warszawa - Kraków.

Kunkel O. 1931. *Pommerche Urgeschichte in Bildern*. Stettin.

Liversage D. 1987. Mortens Sande 2 – A Single Grave Camp Site in Northwest Jutland. *Journal of Danish Archaeology* 6, 101–124.

Machnik J. 1966. *Studia nad kulturą ceramiki sznurowej w Małopolsce*. Wrocław - Warszawa - Kraków.

Machnik J. 1977. *Frühbronzezeit Polens (Übersicht über die Kulturen und Kulturgruppen)*. Wrocław - Warszawa - Kraków - Gdańsk.

Machnik J. 1978. Wczesny okres epoki brązu. In: Gardawski A. / Kowalczyk J. (eds.), *Prahistoria ziem polskich, vol. III. Wczesna epoka brązu*, 9–136. Wrocław - Warszawa - Kraków - Gdańsk.

Machnik J. 1979. Plemiona kultury pucharów dzwonowatych. In: Hensel W. / Wiślański T. (eds.), *Prahistoria ziem polskich, vol. II. Neolit*, 337–411. Wrocław - Warszawa - Kraków - Gdańsk.

Machnik J. 1987. *Kultury z przełomu eneolitu i epoki brązu w strefie karpackiej*. Prace Komisji Archeologicznej nr 26. Wrocław - Warszawa - Kraków - Gdańsk - Łódź.

Makarowicz P. 1998. *Rola społeczności kultury iwieńskiej w genezie trzcinieckiego kręgu kulturowego (2000-1600 BC)*. Poznań.

Makarowicz P. 2000a. Osadnictwo społeczności kultury iwieńskiej oraz trzcinieckiego kręgu kulturowego (2400-1400/1300 BC). In: Kośko A. (ed.*), Archeologiczne badania ratownicze wzdłuż trasy gazociągu tranzytowego. Tom III, Kujawy. Część 4, Osadnictwo kultur późnoneolitycznych oraz interstadium epok neolitu i brązu: 3900-1400/1300 BC*, 457–550. Poznań.

Makarowicz P. 2000b. Concerning the Development of the Metallurgy in Early Bronze Age Societies on the Polish Lowlands. *Lietuvos Archeologija* 19, 221–239.

Makarowicz P. 2001. The Second Half of the Third and Second Millennium BC in Kujawy, Northern Poland, in the Light of ^{14}C Determinations. In: Czebreszuk J. / Müller J. (eds.), *Die absolute Chronologie in Mitteleuropa 3000-2000 v. Chr.*, Studien zur Archäologie in Ostmitteleuropa 1, 209–270. Poznań - Bamberg - Rahden/Westf.

Makarowicz P. 2003. The Construction of Social Structure: Bell Beakers and Trzciniec Complex in North-Eastern Part of Central Europe. *Przegląd Archeologiczny* (in print).

Makarowicz P. / Czebreszuk J. 1995. Ze studiów nad tradycją pucharów dzwonowatych w zachodniej strefie Niżu Polski. *Folia Praehistorica Posnaniensia* 7, 98–133.

Makarowicz P. / Milecka K.1999. Society and the Environment. A Case of Early Bronze Age Settlements Complex from Rybiny, Kujawy, Poland. *Archaeologia Polona* 37, 49–70.

Noworyta E. 1976. Nowe odkrycia kultury pucharów dzwonowatych na Śląsku. *Silesia Antiqua* 18, 49–56.

Rassmann K. 1993. *Spätneolithikum und frühe Bronzezeit im Flachland zwischen Elbe und Oder*. Lübstorf.

Sarnowska W. 1969. *Kultura unietycka w Polsce*, vol. I. Wrocław - Warszawa - Kraków.

Seger H. 1934. Neue Funde aus der Glockebecherkultur. *Altschlesien* 4, 83–104.

Schroeder R. 1951. *Die Nordgruppe der Oderschnurkeramik*. Berlin.

Shennan S.J. 1976. Bell Beakers and their context in Central Europe. In: Lanting J.N. / Van Der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 231–239. Bussum/Haarlem.

Shennan S.J. 1986. Interaction and change in third millennium BC western and central Europe. In: Renfrew C. / Cherry J.F. (eds.), *Peer Polity Interaction and Socio-Political Change*, 137–148. Cambridge.

Strahl E. 1990. *Das Endneolithikum im Elb-Weser-Dreieck*. Hannover.

Struve K.H. 1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen*. Neumünster.

Vandkilde H. 1996. *From Stone to Bronze. The Metalwork of the Late Neolithic and Earliest Bronze Age in Denmark*. Aarhus.

Vandkilde H. 2001. Beaker Representation in the Danish Late Neolithic. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, Vol. I, 333–360. Trento.

Waldren W.H. / Kennard R.C. (eds.), 1987, *Bell Beakers of the Western Mediterranean, The Oxford International Conference 1986*, British Archaeological Report, International Series 331. Oxford

Włodarczak P. 1998. Chronologia absolutna grupy krakowsko-sandomierskiej kultury ceramiki sznurowej na podstawie danych z cmentarzyska w Żernikach Górnych. *Sprawozdania Archeologiczne* 50, 31–54.

Włodarczak P. / Kowalewska-Marszałek H. 1998. Datowanie bezwzględne zespołu kultury pucharów dzwonowatych z Sandomierza. *Sprawozdania Archeologiczne* 50, 55–82.

Wojciechowski W. 1972. Uwagi o kulturze pucharów dzwonowatych na Dolnym Śląsku. *Silesia Antiqua* 14, 33–63.

Wojciechowski W. 1976. Sztylety krzemienne typu skandynawskiego w Polsce Zachodniej. Ze studiów nad kontaktami Polski zachodniej z południową Skandynawią w późnym neolicie i początkach epoki brązu. *Acta Universitatis Wratislaviensis. Studia Archaeologica* 7, 37–94.

Wojciechowski W. 1987. The Bell Beaker Culture in Southern Poland: Origin and Evolution. In: Waldren W.H. / Kennard R.C. (eds.), *Bell Beakers of the Western Mediterranean. The Oxford International Conference 1986.* British Archaeological Report, International Series 331, 685–709. Oxford.

Zich B. 1996. *Studien zur regionalen und chronologischen Gliederung der nördlichen Aunjetitzer Kultur.* Berlin - New York.

Żurowski J. 1932. Pierwsze ślady kultury pucharów dzwonowatych w Polsce. *Wiadomości Archeologiczne* 11, 117–155.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

Bell Beaker Culture in South-eastern Poland

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Although the first Bell Beaker Culture (BBC) cemetery was discovered in Little Poland as early as in 1927 (Żurowski 1932), features attributable to this culture continue to be extremely rare finds. Fairly numerous series of assemblages were still being uncovered in the early 1960s (Kamieńska / Kulczycka 1964; Krauss 1964; Prokopowicz 1964; Krauss 1971), but the last new BBC grave came to light there as long as 17 years ago (Kowalewska-Marszałek / Cyngot 1989). Materials of this culture always attract considerable interest, if only because of their rarity, and yet they never became the subject of a thorough publication and close to half of the assemblages were never published at all. In the past 15 years or so we witnessed tremendous progress in studies of Late Neolithic (e.g.: Machnik 1999; Włodarczak 2000; 2001) and Early Bronze Age (e.g.: Kadrow 1991; 1995; Kadrow / Machnik 1997) cultural phenomena and the lack of a modern treatment of the BBC is increasingly hindering the study of broader prehistoric issues in regional scale. We are presenting the principal results of a research intended to bridge this gap.

We know eight BBC cemeteries in the Little Poland Upland (Fig. 1), containing 27 graves in all. We also have a small collection of isolated finds as well as some graves which cannot be linked to this culture with certainty. Six of the cemeteries were discovered in the Sandomierz Upland and its immediate foreland, with just two being located in the loess uplands of western Little Poland.

All the BBC cemeteries are sited on prominent elevations, in most cases in places where other Late Neolithic and Early Bronze Age communities also buried their dead. As a rule, the cemeteries occupy the eastern (Beradź, Święcice) or southern (Samborzec; „Grodzisko II" and „Nad Wawrem" in Złota) slopes of elevations, close to their summits. Six of the eight known cemeteries lie close to the Vistula river, on the edges of loess plateaus (Sandomierz, Złota, Samborzec) or on elevated terraces (Kraków-Krzesławice, Świniary Stare). The remaining two cemeteries (Beradź, Święcice) are deeper inside the loess uplands, occupying elevations overlooking valleys of large water courses. All the cemeteries are small, consisting of just several graves which do not form concentrations but rather strings, running mostly along the N–S line (Fig. 2).

All the BBC graves in the Little Poland Upland are pit graves with no external structures of any kind. The vast majority (12 out of 15 documented cases) are regular, rectangular features measuring 110–170 x 80–130 cm. The size of the graves does not vary significantly depending on whether a man, woman or child was buried in them, the only difference being that chil-

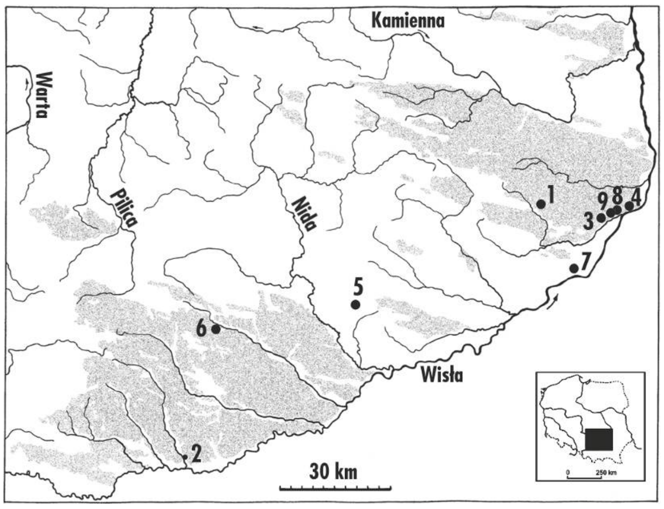
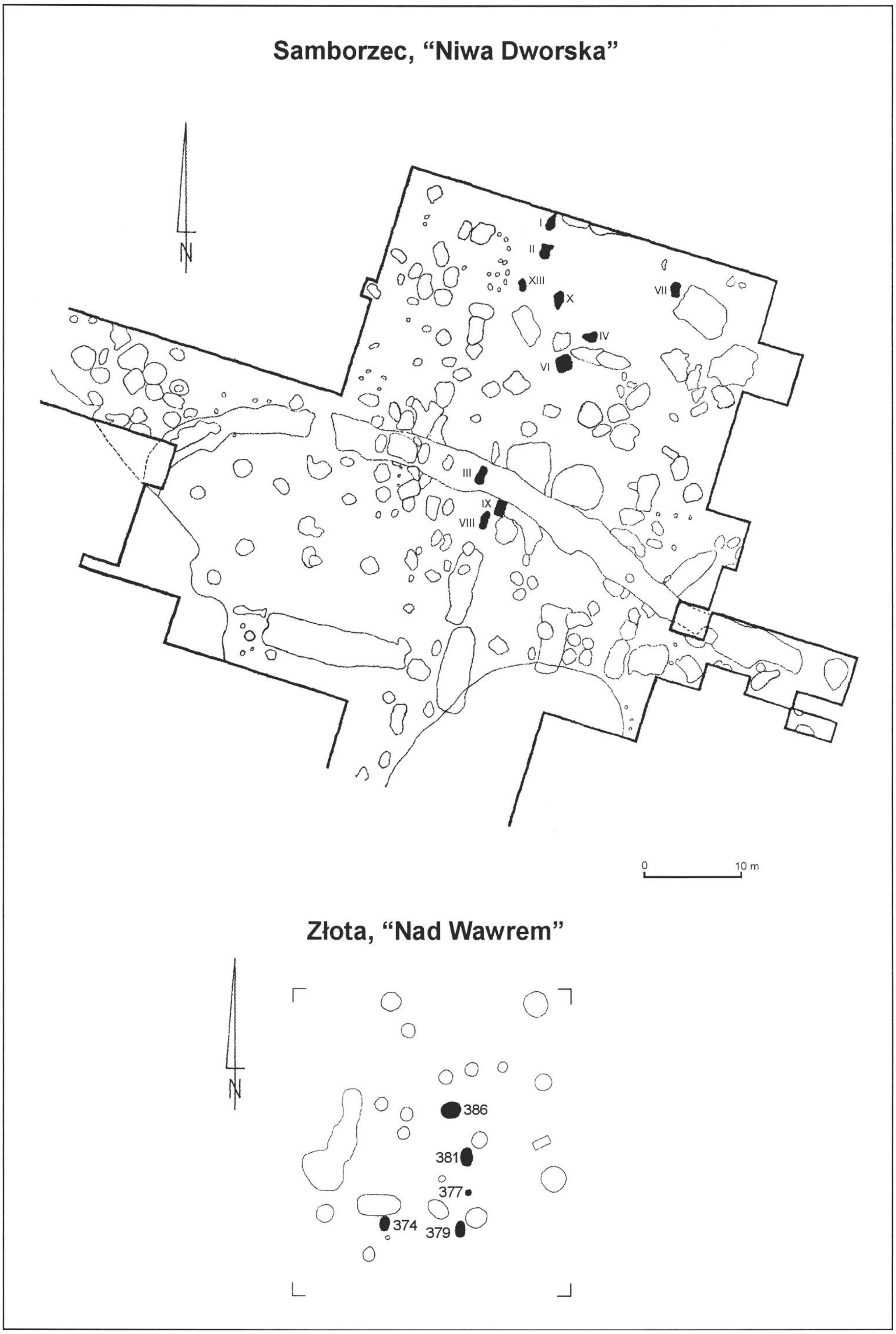


Fig. 1. BBC grave sites in the Little Poland Upland. 1 – Beradź, 2 – Kraków-Krzesławice, 3 – Samborzec, 4 – Sandomierz, 5 – Siesławice, 6 – Święcice, 7 – Świniary Stare, 8 – Złota, „Grodzisko II", 9 – Złota, „Nad Wawrem". The loess-covered areas are marked in gray. In addition to cemeteries mentioned in the text, the map also shows the Siesławice site which yielded a single BBC cup that was probably a grave goods element.



Samborzec, “Niwa Dworska”

N
I
II
XIII
X
VII
IV
VI
III
IX
VIII
0
10 m

Złota, “Nad Wawrem”

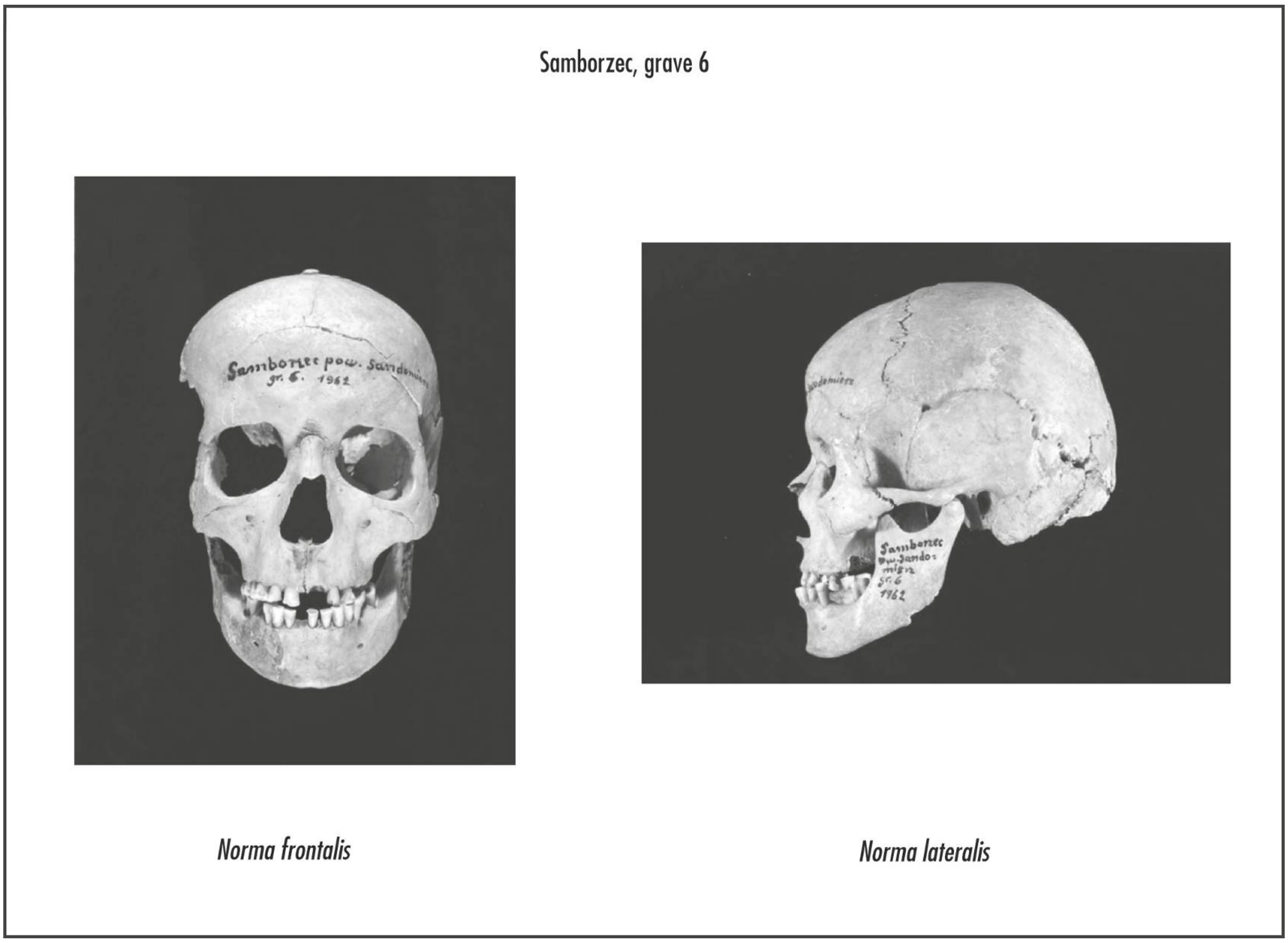
N
386
381
377
374
379

Fig. 2. Example of graves distribution in BBC cemeteries in Little Poland.

dren's graves were as a rule much shallower than the others. This is especially apparent in the Samborzec cemetery where child graves were 30–50 cm deep, as compared to 60 to 140 cm in the case of adult inhumations. The graves' longer axes were in most cases oriented N–S. There was just one cremation grave — feature 386b in the „Nad Wawrem" cemetery in Złota — with all the other graves containing single skeletons.

A series of 17 skeletons provided a basis for an anthropological characteristic of BBC people from the Little Poland Upland. The main characteristic of BBC representatives is the shape of the back part of their skull, namely a distinct flattening of the upper part of the occipital bone and of an area of the parietal bone in the region of the *obelica* and *lambdoidea* sections of the sagittal suture (Fig. 3). Consequently, skull proportions as expressed with the breadth-to-length (cephalic) index allowed to classify the skulls as short (brachycranic) or very short (hyperbrahycranic). The remaining proportions showed greater variability: the skulls had medium or narrow foreheads, medium or narrow faces and jaws, medium or narrow noses and low orbits. The *glabella* was protruberant, the mastoid processes were big, the nose was prominent and the cheeks were massive. The shape of cranial bones and development of muscle attachments on long bones are indicative of a relatively massive structure of the body. Stature calculated on the basis of long bone measurements suggests that the individuals in question were tall (Gleń-Haduch 1990; Kapica 1958; Sedlaczek-Komorowski 1935; Wojdanowicz / Pyżuk 1989).

The skeletons show very characteristic morphological traits distinguishing them from other Neolithic groups (Funnel Beaker [TRB] and Corded Ware Cultures) as well as the Mierzanowice Culture populations of the Early Bronze Age (Fig. 4). The Bell Beaker people constituted an alien element among the population living in the region of the Upper Vistula basin, completely different in terms of anthropological structure (Haduch 1997, 122-166). Among them four female skeletons are different, featuring a long skull and concave occipital region, reminiscent of the local Neolithic and Early Bronze Age specimens from Little Poland (Fig. 5). It can thus be suggested that these women were descended from the local population, while the Bell Beaker people was genetically foreign to these territories.



Norma frontalis

Norma laterialis

Fig. 3. Exemplary short (brachycranial) skull of a BBC individual (Samborzec, grave VI, woman, *maturus*).

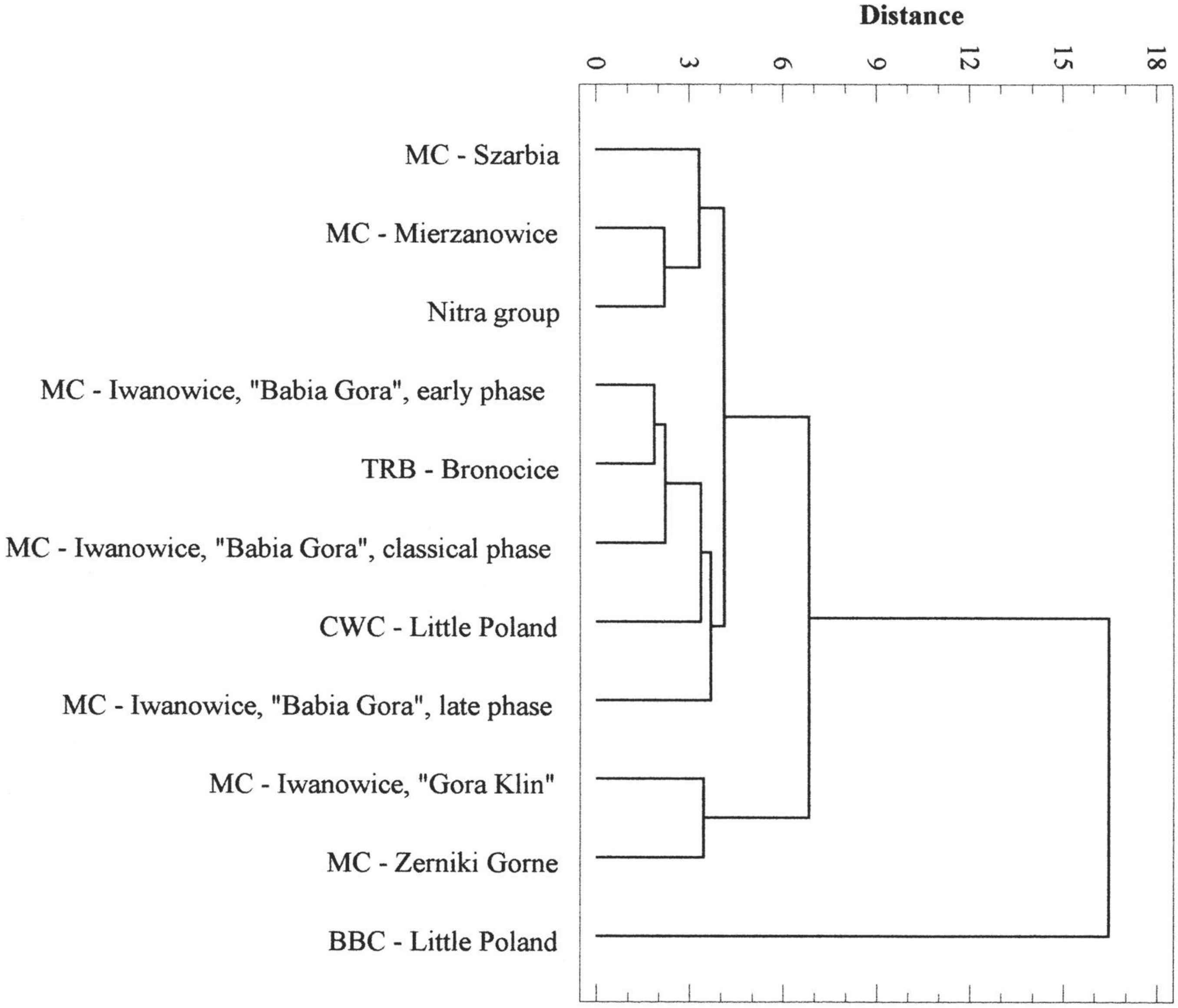


Fig. 4. Squared Euclidean Distance comparison of skulls of BBC individuals and selected Neolithic and Early Bronze Age populations

In describing past people it is important to analyze their biological status in terms of interactions between socio-cultural factors, health status and environmental condition. Weaker individuals, more vulnerable to unfavorable external condition, were more affected by frequent diseases and mortality. In one case enamel hypoplasia resulting from disturbed mineralization during tooth bud formation caused by metabolic stress due to calcium, phosphorus or vitamin D deficiency was observed. Porotic hyperostosis (*cribra orbitalia*) in the upper part of the orbital roof is the result of an increased demand of the organism for blood in the case of anemia (Haduch / Szostek / Głąb 1997). This deficiency can be caused by nutritional stress, certain nutritional habits, disturbances in iron, vitamin B_{12} and C assimilation. Anemia diminishes the organism's immunity, thus contributing to an increased mortality rate. The changes in the orbital roof were severe in five children's and adolescent skulls, probably causing the death of the 0-1-year child from Samborzec. In four cases degenerative and deformational changes affecting vertebral and hip joints were observed. The adolescent skull from grave I in Samborzec features obliterated sutures. Premature craniosynostosis can produce increased intracranial pressure as well as mental or neurological problems. In two cases (Samborzec graves VI and X) multiple myeloma lesions of the bones were diagnosed. This disease was most certainly the cause of death. Such a high incidence of pathological changes and large number of children in the studied series confirm that the lifestyle of BBC populations required high adaptive capacity, with the stress to which the organisms were exposed leading to many diseases.

The age of the dead was determined in 17 cases. The percentage of children is considerable, although

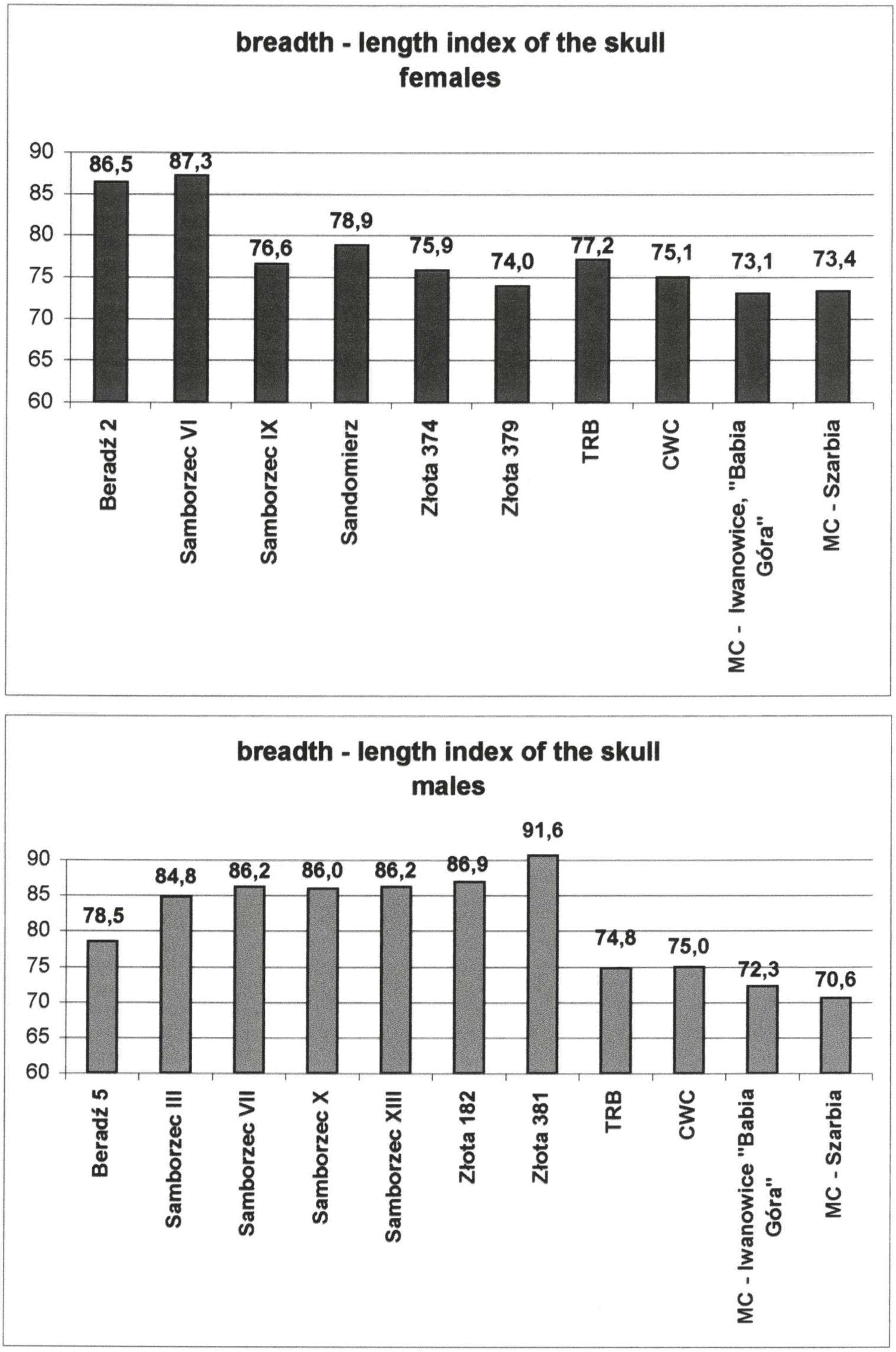


Fig. 5. Comparison of the breadth-to-length (cephalic) index of skulls of BBC individuals and selected Neolithic and Early Bronze Age populations from the Little Poland Upland

slightly lower than in other provinces of the eastern BBC group. The Little Poland graves contain a surprisingly high proportion of *maturus* and *senilis* burials. In the area considered here the percentage of inhumations in these age categories is also high in the Corded Ware Culture (CWC; Włodarczak 2000) and Mierzanowice Culture (MC; Kadrow / Machnikowie 1992, 94). The age structure of the BBC inhumations in Little Poland (Fig. 6) thus appears to be the result of two overlapping trends: the one characteristic for BBC (high percentage of *adultus* burials) and the other, local in nature, characteristic for CWC and MC (high percentage of *maturus* and *senilis* burials). The adult burials include six female and seven male, with the remaining skeletons (including all the children) being undetermined as to sex. The roughly equal number of male and female inhumations is also characteristic for other BBC regions in Central Europe (e.g.: Bruchhaus / Neubert 1999; Havel / Pavelková 1989). The percentage of female burials is here usually higher than in CWC cemeteries. Both the CWC and MC cemeteries in the Little Poland Upland exhibit a clear predominance of male burials (Włodarczak 2000; Kadrow / Machnikowie 1992, 94).

We have data on body orientation for 23 of the BBC graves from the Little Poland Upland. Rigorous rules are immediately apparent: 18 of the bodies were laid out N–S, with the remaining five oriented NE–SW. The bodies lay crouched on their sides (12 known cases) or on their backs (7 cases). The knees were always pointing east or south-east, the same direction the head was turned to. Age had no bearing on body arrangement but rules as to sex were observed rigorously. Male bodies had their heads towards the north, with females positioned the other way round. Men had their faces and knees turned to the left side of the body (Fig. 7A), while women — to the right side (Fig. 7B). This rule was observed by BBC people in all of Central Europe (e.g. Häusler 1966). The legs of the dead were bent at right or obtuse angles at the hip joints and acute angles (in excess of 30°) at the knee joints. There is a group of burials however with the knee joint angle being extremely acute (less than 30°), reflecting the pattern known from burials of the Cracow-Sandomierz CWC group (Włodarczak 2000). Arm arrangements were legible in 13 cases and there was only one repeated pattern, namely arms bent at the elbow towards the face (seven cases).

The adult *(maturus)* male burial in grave III in Samborzec deserves separate mention. The skeleton was laid out on its back, with legs bent at the knees and spread outwards. The arms, clearly bent at the

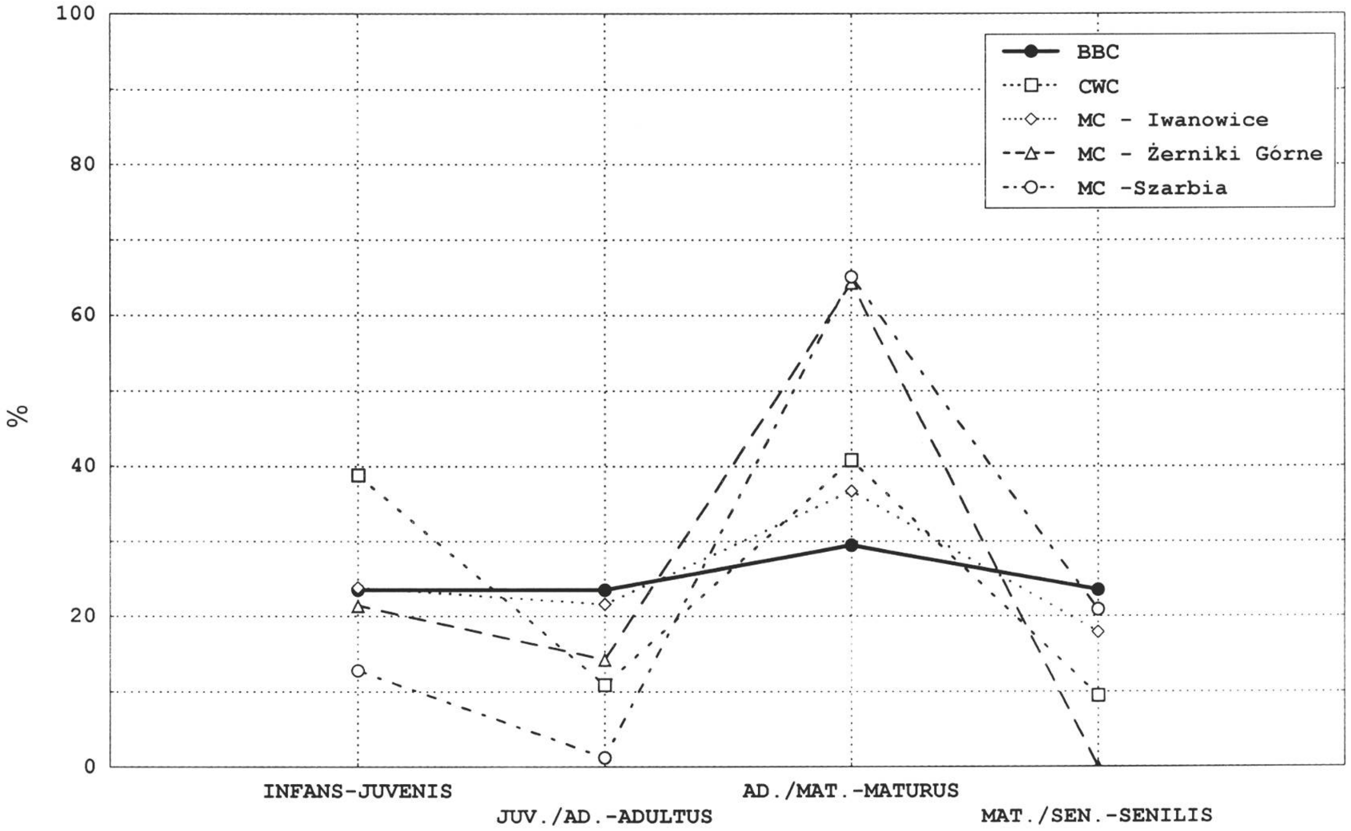


Fig. 6. Comparison of the ages of individuals buried in BBC graves in Little Poland with the age structures in selected cultural groups from the Little Poland Upland. Based on data in Baczyńska 1994, Kadrow / Machnikowie 1992, Kempisty 1978.

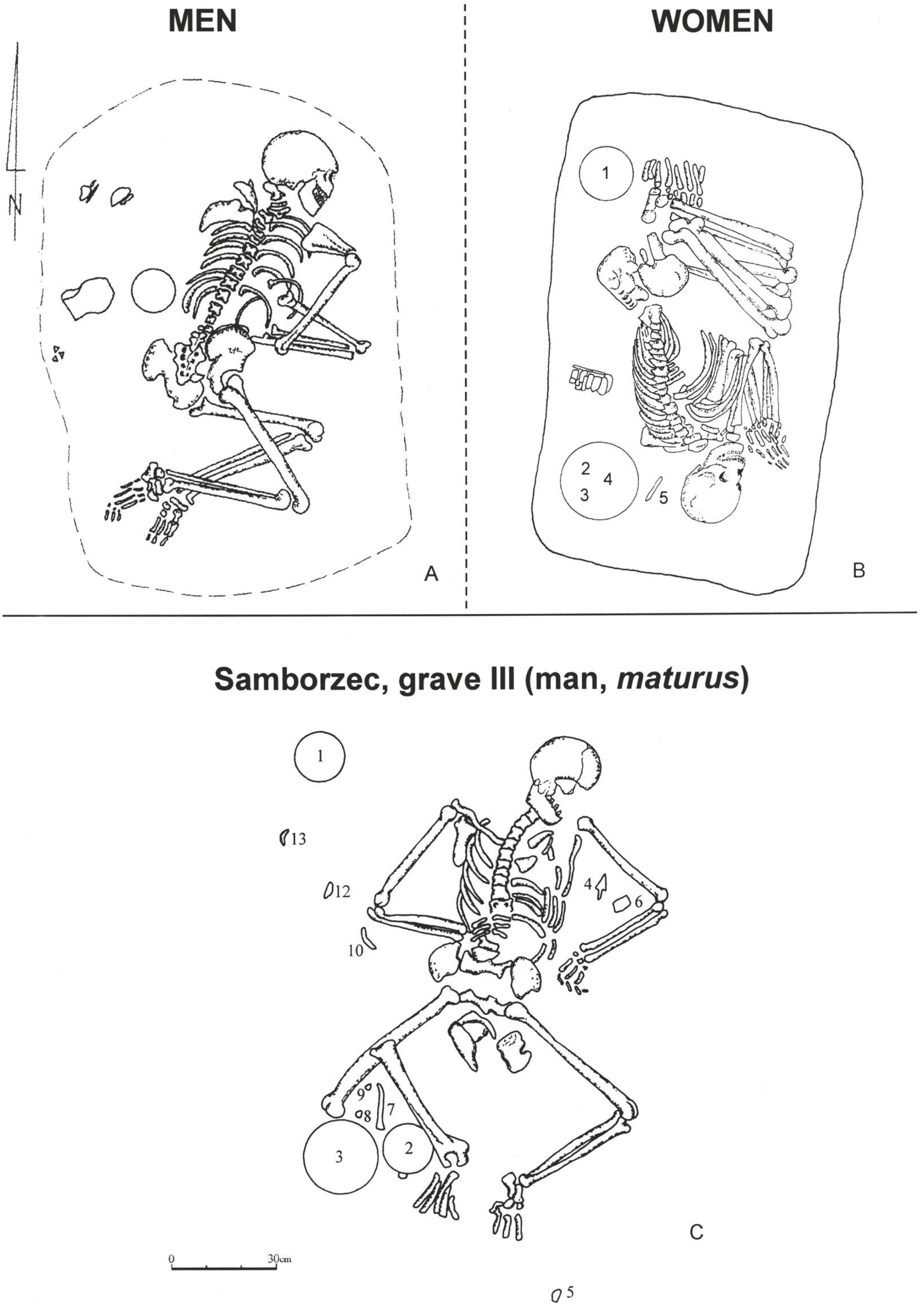

MEN
WOMEN
N
A
1
2
3
4
5
B
Samborzec, grave III (man, *maturus*)
1
13
12
10
4
6
9
8
7
3
2
C
0
30cm
5

Fig. 7. Examples of male (A; Samborzec, grave X) and female (B; Samborzec, grave VI) BBC burials from the Little Poland Upland and the special body arrangement in grave III in Samborzec (C).

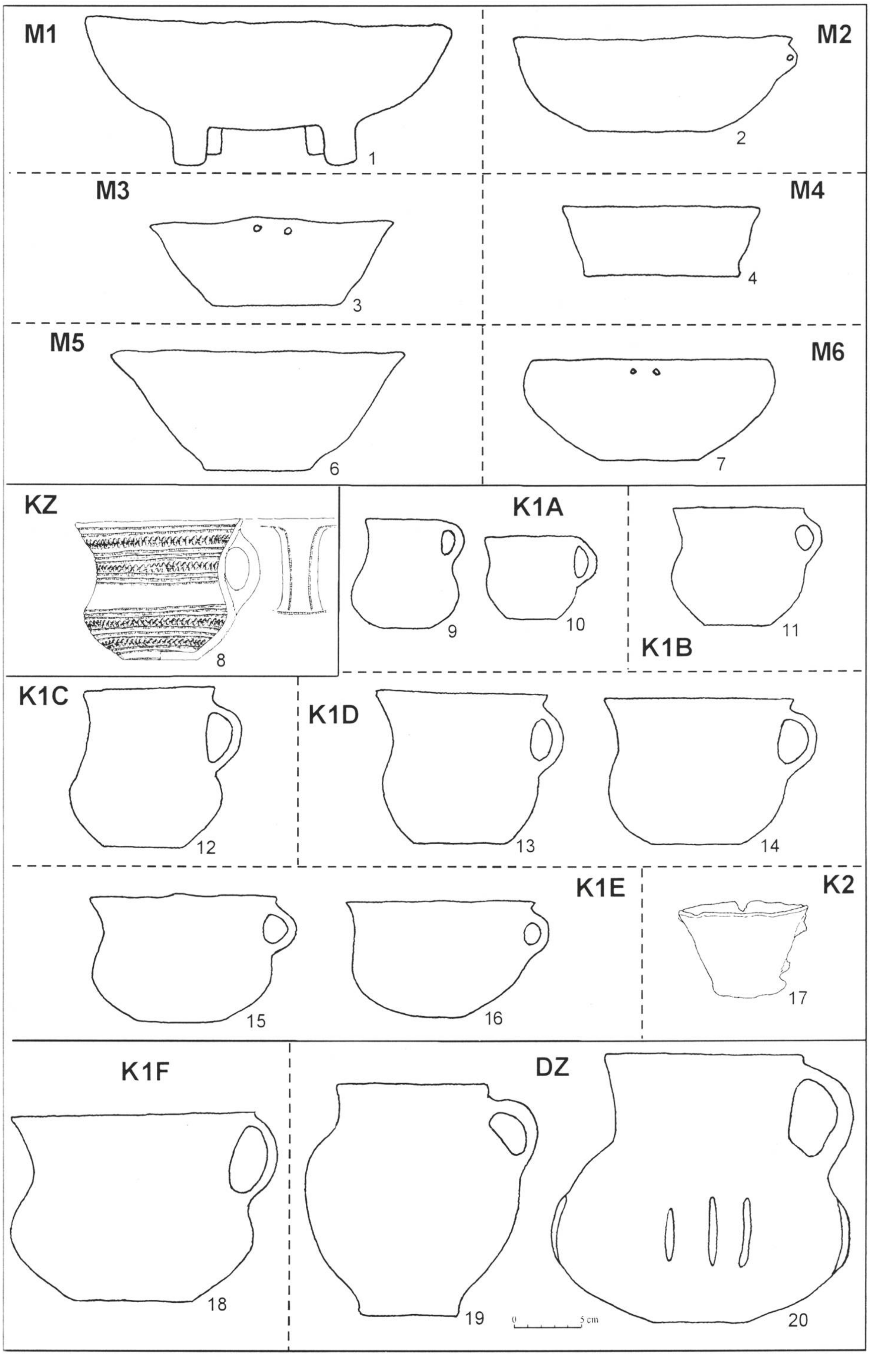

M1
1
M2
2
M3
3
M4
4
M5
6
M6
7
KZ
8
K1A
9
10
11
K1B
K1C
12
K1D
13
14
K1E
15
16
K2
17
K1F
18
DZ
19
0
5 cm
20

Fig. 8. Vessel types in BBC graves in the Little Poland Upland.

elbows, were positioned along the body (Fig. 7C). This is a special body arrangement reserved exclusively for males — warriors and chieftains (BÁTORA 1991, 120). This Samborzec grave was also unique among all the BBC graves in Little Poland in terms of grave goods richness. A similar body arrangement makes its appearance in the CWC tradition in Central Europe in the final stages of the Neolithic (e.g.: CHOCHOROWSKI 1976; MARCINIAK 1960, 49, fig. 7; OEFTIGER 1999, 64, Abb. 38; SCHMIDT-THIELBEER 1955, 97 and Taf. XVIII:2). Although the closest analogies to the body arrangement in grave III from Samborzec are to be found in CWC and the Early Bronze Age „post-Corded Ware" cultures, the individual in this grave was buried according to BBC rules applying to male inhumations (head towards the north).

Grave goods were present in all graves classified as belonging to BBC. The artifacts were in most cases placed behind the back of the dead or, less frequently, beneath the legs. All graves contained ceramic vessels. A total of 69 forms were discovered which can be divided into the following four categories:

1.Bowls (Fig. 8:M1-6). These always occurred singly and in three cases were the only artifacts in graves.

2.Small unornamented cups — mostly of the K1A variety, but also K1B, K1C and K2 (Fig. 8:K1A-C, K2) — one or two per grave, often accompanied by large cups (K1D and K1E) and bowls.

3.Large unornamented cups (Fig. 8:K1D-E) and ornamented specimens (Fig. 8:KZ), occurring singly, often alongside other vessels (small cups and bowls), sometimes being the only ceramic artifacts in graves.

4.Jugs (Fig. 8:DZ). There were just two of these, both in the same grave. It is possible that the very large cups (Fig. 8:K1F) discovered in 2 graves served the same function as jugs.

The BBC ceramic materials from Little Poland are thus characteristic in entirely lacking ornamented bell beakers. Ornamented cups are also exceptional, being present in just one assemblage (Beradź, grave 1). The ornament on them is distributed in two zones (Fig. 8:KZ), in the manner often observed in BBC assemblages in Central Germany (SHENNAN / WILCOCK 1975). However, we lack close analogies to the ornamental motifs on the Beradź cups.

Technologically, the BBC ceramic artifacts differ greatly from those of the other Late Neolithic and Early Bronze Age cultures of Little Poland. The most characteristic technique involved the coating of exterior surfaces with a layer of slip (fluid suspension of clay in water). This was in most cases a thin and easily decaying layer, and thus hard to detect. Traces of this process were discovered on 26 artifacts, and it was particularly frequently on vessels recovered from the Samborzec cemetery (14 specimens).

When analyzing ceramic inventories, it is hard to discern relationships between vessel types and sex of the buried individual. This is also true of CWC assemblages (WŁODARCZAK 2000). Both male and female burials were accompanied by similar numbers of vessels, with BBC graves being significantly different from CWC burials in that the age of buried individuals had no bearing on grave goods. Both the BBC child and adult inhumations in the Little Poland Upland are accompanied by similar sets of vessels, of similar types and sizes.

The second most numerous group of artifacts in BBC graves in Little Poland are bow equipment elements, including flint arrowheads (27 specimens in 5 graves), bone arrowheads (2 finds – Fig. 9:6-7), lithic wristguards (4 finds – Fig. 9:9) and one lithic arrowshaft smoother (Fig. 9:8). Artifacts of this kind accompany only male burials.

The flint arrowheads were shaped with particular care. The vast majority of their number were made by flat surface retouch using the pressure technique (BORKOWSKI 1987, 173-175). There is one markedly distinct arrowhead from Samborzec, made with simple edge retouch of a previously overheated flint (Fig. 9:2). The arrowheads divide into three major varieties depending on their base formation:

1.Specimens with shallow, asymmetrically triangular or arched notches which often make the entire arrowheads asymmetrical (Fig. 9:1-2).

2.Specimens with symmetrical, trapeze-shaped and usually deep notches (Fig. 9:3-4).

3.Arrowheads with very deep, symmetrical, arch-shaped notches (Fig. 9:5).

In terms of basic dimensions and proportions, the arrowheads divide into two distinct groups, namely the smaller (20.5–26.5 x 16.0–19.5 mm) and the larger (26–32 x 19–22 mm). The largest specimens in both groups are also the most slender ones. The arrowheads with trapeze-shaped notches in their base are equally frequently large and small, with the other two categories represented predominantly by small specimens. The size variations visible in arrowheads were unrelated to massiveness of arrows. The widths of base notches in arrowheads were similar in all cases, usually ranging from 11 to 15 mm. The BBC arrowheads are considerably larger than specimens attributed to the Cracow-Sandomierz group of CWC (Fig. 10). This means that the massive proportions of BBC ar-

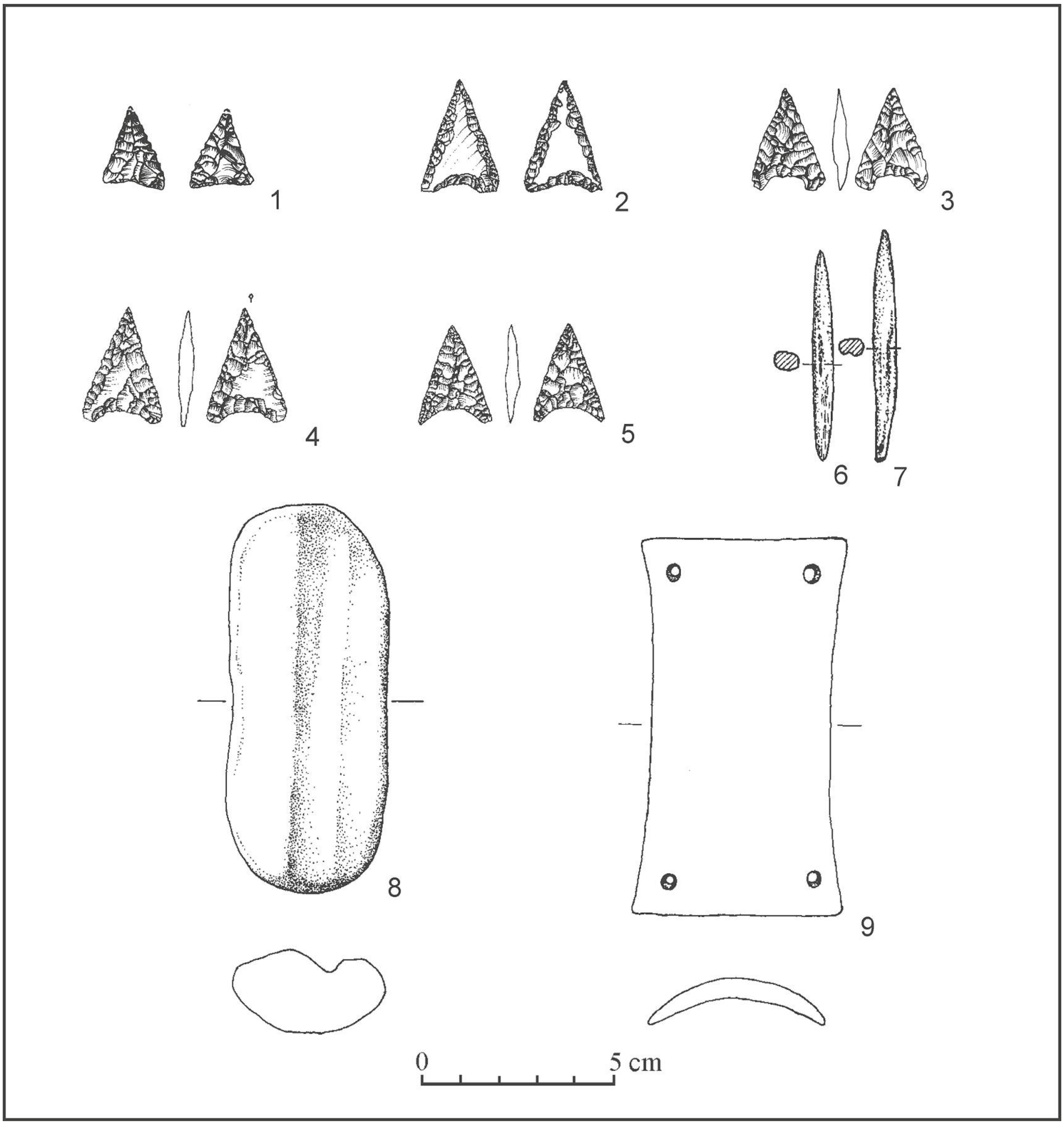


Fig. 9. Bow equipment elements recovered from BBC graves in the Little Poland Upland: flint arrowheads (1-5), bone arrowheads (6-7), lithic arrow-shaft smoother (8), lithic wristguard (9). 1 – Samborzec, grave III; 2, 6-7 – Samborzec, grave X; 3 – Złota, „Grodzisko II", grave 173; 4-5 – Święcice, grave 5; 8-9 – Beradź, grave 5.

rowheads can be regarded as their distinguishing characteristic.

Tools were buried together with male inhumations as a standard practice. Seven grave assemblages included flint strikers fashioned out of destroyed tools (Fig. 11:1) as well as knives with continuous cutting edges (Fig. 11:2-3). The latter were made from flakes using simple edge retouch. Three assemblages yielded massive flint side-scrapers on flakes (Fig. 11:4-5), and likewise three graves (all in Samborzec) contained daggers. One of the latter was a copper tool (Fig. 11:8), while the other two were flint implements, both fashioned differently from different raw materials (Fig. 11:9-10). Also found was a single flint combined tool (scraper + borer – Fig. 11:6) and splintered piece (Fig. 11:7). The only tools ever found in women's graves were awls (Fig. 11:11).

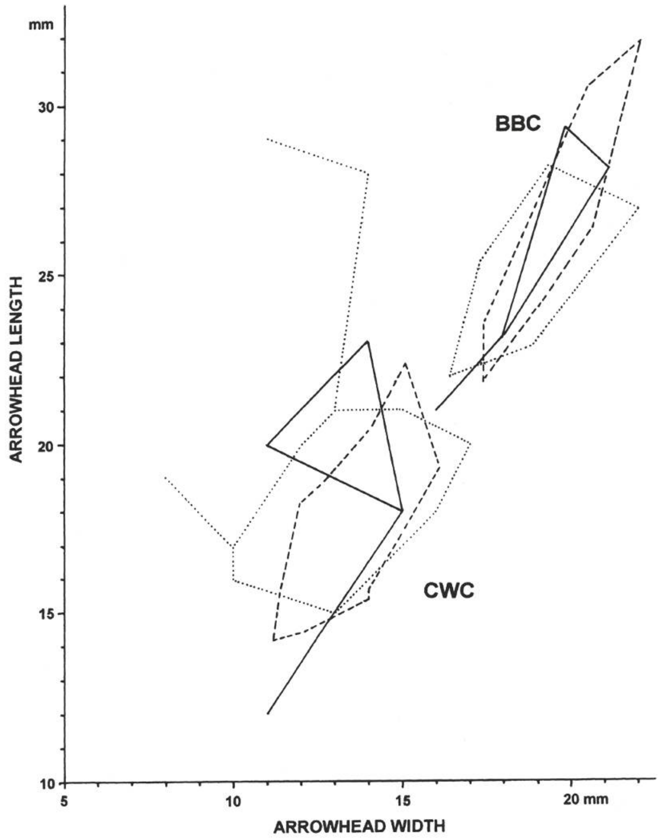


Fig. 10. Comparison of dimensions of flint arrowheads of the BBC and the Cracow-Sandomierz CWC group in the Little Poland Upland. BBC: continuous line – graves III and X in Samborzec; dash line – Święcice: grave 5; dotted line – Złota „Grodzisko II": grave 173. CWC: continuous line – Zielona: grave 3; dash line – Koniusza: grave 3; dotted line – Żerniki Górne.

Three of the graves which contained bow equipment (grave 5 in Beradź, grave III in Samborzec, and grave 173 in the „Nad Wawrem" cemetery in Złota) yielded also flint workshop elements, namely sets of pre-selected flint flakes, two of which were also accompanied by pairs of similar retouchers made from wild boar or pig tusks (Fig. 11:12) and from bone (Fig. 11:13) or antler (Fig. 11:14). These goods suggest that flintworking in the BBC tradition was the job of specialized individuals, this being in line with the situation in that particular stretch of prehistory. We have similar grave goods in CWC materials from Little Poland (Budziszewski / Tunia 2000) and other settlement concentrations of the eastern BBC group (e.g.: Langová / Rakovský 1981; Buchvaldek 1990, 30; Kaufmann 1969, 27-28).

Although the BBC graves in Little Poland yielded a mere 62 flint artifacts, their excellent homogeneity makes possible a reconstruction of the main features of the culture's flint industry (Budziszewski 1991, 187-190). The basic raw material in the Sandomierz Upland was banded flint (Michniak / Budziszewski 1995, Fig. 4), which accounts for nearly three out of four finds in hand. The other raw materials available in the region (chocolate – Michniak / Budziszewski 1995, Fig. 5; Cretaceous erratic and Świeciechów – Michniak / Budziszewski 1995, Fig. 6) were used sporadically. Also rare are imports of Volhynian and Jurassic (variety G) flints. On the other hand, the basic raw material in Święcice (western Little Poland loess region) was the Jurassic G flint variety (Kopacz / Pelisiak 1991, Fig. 1). Unlike in Late Neolithic flint industries in Little Poland, the BBC knappers had no preferences as to raw material when making the various categories of implements. They also treated their most frequently used flints in the most diverse manner. Worth noting is that the raw materials preferred most came from deposits which previously supplied the largest Neolithic flint processing centers. However, the BBC people were probably not upholding the local mining traditions. Two of the examined flakes bear unmistakable traces of reutilization, which suggests that the flint raw material was procured by digging up Neolithic flint workshops sited next to mines. Although primitive as a mining technique, this was a highly economical method of raw material acquisition, given that simple extraction methods were required and that such man-made concentrations of raw material were richer than any natural deposit. No other community practiced this method of raw material acquisition in the Late Neolithic and Early Bronze Age in Little Poland (Budziszewski 1998).

Core formation involved hard hammerstones and depended on the form of the particular raw material piece. Preparatory work consisted of a rather careless formation of the platform, with even this simple job apparent only in less than half the butts. This manner of core exploitation enabled the obtaining of just a few flakes from each platform and required frequent changes of core orientation. The only blade form in the analyzed inventories was made from Volhynian flint and was probably imported in finished form. The preference for amorphic core processing is hard to understand, given the clear discrepancy between the parameters of blanks it gave and the form of tools most often made out of them (Fig. 12). In the Late Neolithic, arrowheads were usually made from much thinner flakes. In the CWC Cracow-Sandomierz group such implements were produced using the Levalloisian technique (Budziszewski / Tunia 2000, 108-121). The length-to-width ratio of knife inserts with continuous blades — the second most numerous tool group in the studied assemblages — is usually 2:1, and the daggers are even more slender. These parameters were

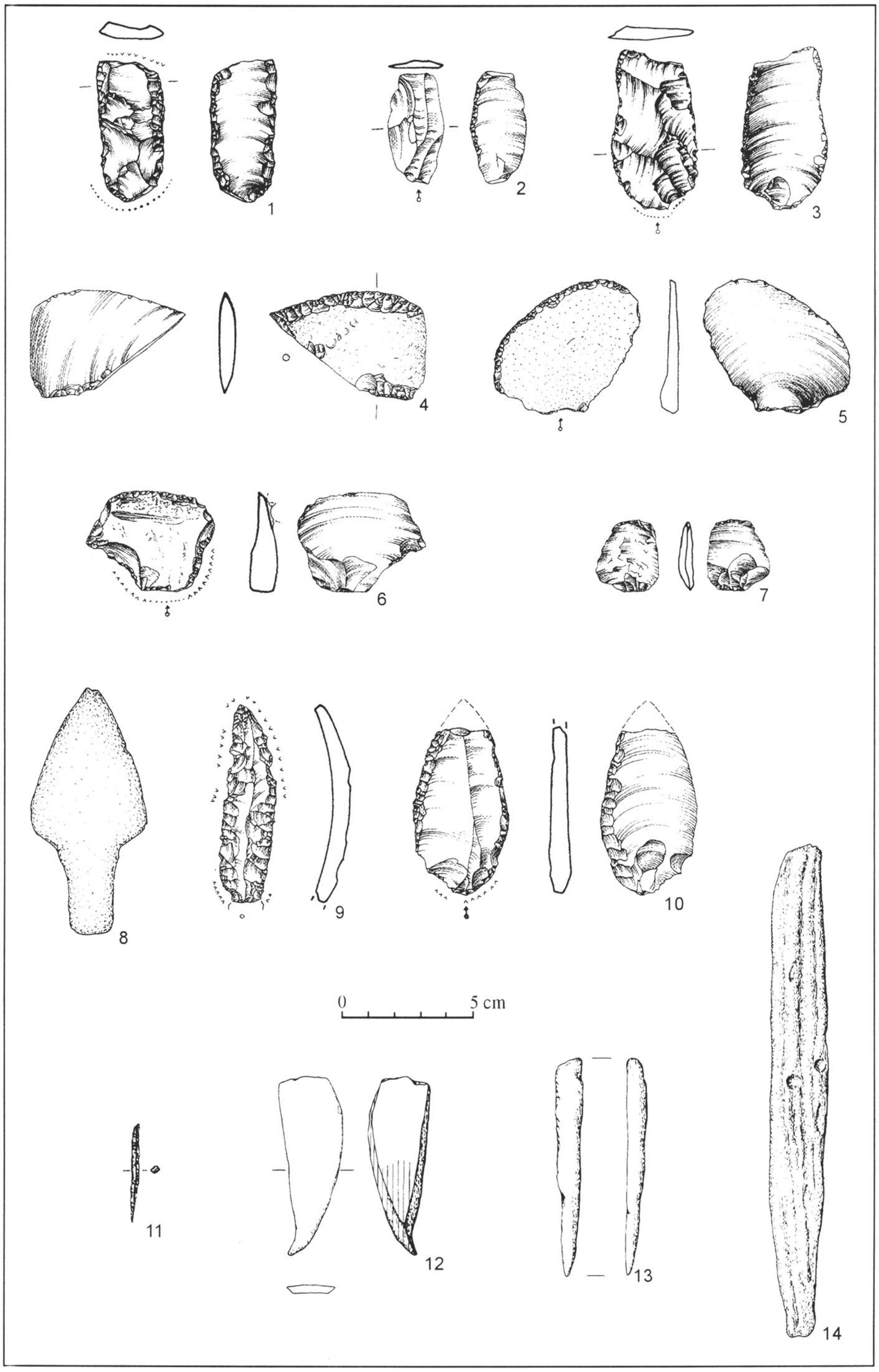


Fig. 11. Types of tools from BBC graves in the Little Poland Upland: flint knives with continuous cutting edges (1-3), specimens bearing traces of being used as strikers (1, 3, 6, 9, 10), flint side-scrapers (4-5), flint combined tool: scraper + borer (6), flint splintered piece (7), copper (8) and flint (9-10) daggers, copper awl (11), pressers-retouchers made from wild boar or pig tusks (12), bone (13) or antler (14). 1, 12-13 – Beradź, grave 5; 2, 6, 10 – Samborzec, grave X; 3, 7 – Święcice, grave 5; 4, 9 – Samborzec, grave VII; 5 – Złota, „Grodzisko II", grave 173; 8, 14 – Samborzec, grave III, 11 – Sandomierz.

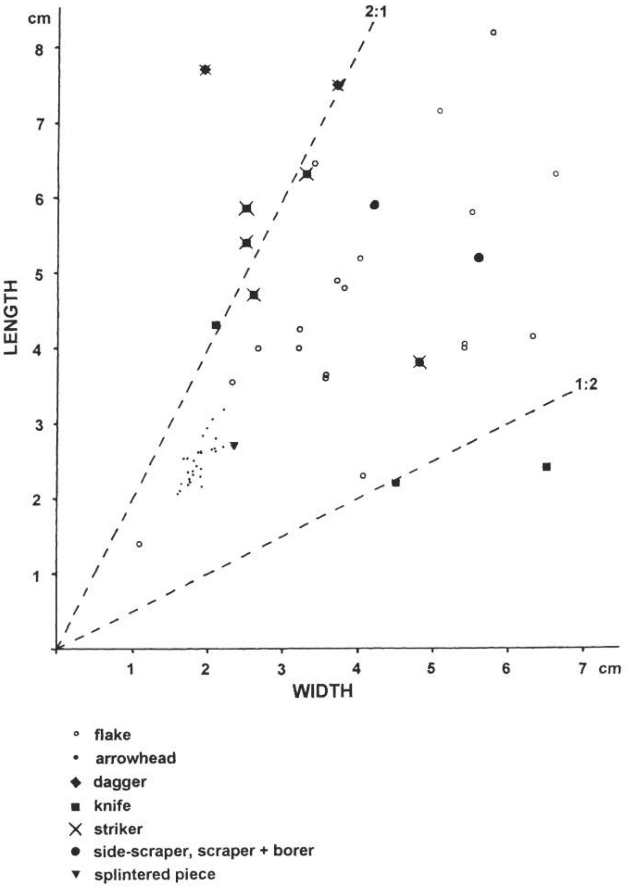


Fig. 12. Comparison of the proportions of flint flakes and tools recovered from BBC graves in the Little Poland Upland.

achieved when both the slimmest and the extremely short flakes were used to make these tools.

Ornaments were discovered alongside both male and female skeletons (8 cases). The male burials contained an ornamented bow-shaped pendant (Fig. 13:1), a small amber bead (Fig. 13:2) and an animal tooth pendant (Fig. 13:3), while the female burials yielded bone buttons with V-shaped holes (found in 4 graves – Fig. 13:4-5), copper or electrum rectangular laminas with small holes (found in 3 graves – Fig. 13:9-10), a bone round plate (Fig. 13:8) and 8-shaped pendant (Fig. 13:7), and a bone or antler sack-shaped pendant (Fig. 13:6). These forms include those particularly characteristic for the eastern-group BBC assemblages, namely buttons with V-shaped holes, bow-shaped pendants and copper laminas. They were accompanied by specimens known not just from other BBC concentrations but also from numerous Late Neolithic and Early Bronze Age cultural groups: round plate with cross motifs executed by punching, animal teeth pendants as well as sack- and 8-shaped pendants.

The inventories discovered in BBC graves in Little Poland are evidence of rigorously observed rules in furnishing men's, women's and children's graves (Table 1). The men's graves contain pottery, weaponry elements, tools and specific types of ornaments. The female burials come with ceramics and ornaments of different kinds than in the men's graves, while child inhumations were accompanied only by pottery.

N°	Site	Grave	Lab. N°	BP	BC (limit – 1σ)
1	Samborzec	I	Ki-7921	3830±50	2400–2380, 2350–2200
2	Samborzec	II	Ki-7922	3870±60	2460–2280, 2250–2230
3	Samborzec	III	Ki-7923	3850±50	2460–2200
4	Samborzec	IV	Ki-7924	3940±50	2560–2540, 2500–2340
5	Samborzec	VI	Ki-7925	3885±50	2460–2300
6	Samborzec	VII	Ki-7926	3990±60	2620–2610, 2590–2450, 2420–2400, 2360–2350
7	Samborzec	IX	Ki-7927	3850±50	2460–2200
8	Samborzec	X	Ki-7928	3870±60	2460–2280, 2250–2230
9	Samborzec	XIII	Ki-7929	3920±60	2480–2300
10	Sandomierz	31	Ki-6153	3790±40	2290–2140

Table 1. Radiocarbon dates from BBC graves in Little Poland Upland. Age determinations calibration was performed with the Oxcal program (Bronk Ramsey 1995) using the INTCAL 98 high-precision calibration curve (Stuiver et al. 1998).

Ten radiocarbon dates were obtained for BBC graves in the Little Poland Upland (Table 2, Fig. 14), including nine from the cemetery in Samborzec and one from Sandomierz (Włodarczak / Kowalewska-Marszałek 1998). The BBC's chronology is based on the Samborzec determinations. Materials from this site are stylistically homogeneous (Fig. 15) while the size of the cemetery suggests it may have been the work of one or two generations. Trying to maximally narrow down the period of the cemetery's operation by wiggle matching, we get 2450–2320 BC. To accept this result would be to conclude that BBC communities occupying the Little Poland Upland were contemporaneous with the late phase of the CWC Cracow-Sandomierz group (Włodarczak 2001) and the so-called proto-Mierzanowice phase (Kadrow / Górski 2001). The slightly younger date from Sandomierz (most probably in the 23rd century BC) may indicate that BBC disappeared from the Little Poland Upland in the early phase of MC (Włodarczak / Kowalewska-Marszałek 1998, 63-65). The relatively early dates for BBC materials from Little Poland are out of tune with the traditional periodization universally accepted in Central Europe and treating assemblages lacking ornamented bell beakers as younger (Hájek 1966).

Both archaeological and anthropological analyses indicate that BBC communities immigrated to Little Poland. Ever since the pioneering work by J. Żurowski, the Polish literature on the subject took to linking their origins with migrations from Moravia (Żurowski 1932, 149; Kamieńska / Kulczycka-Leciejewiczowa 1964, 109; Kamieńska / Kulczycka-Leciejewiczowa 1970, 370). Advocates of this concept recently began treat-

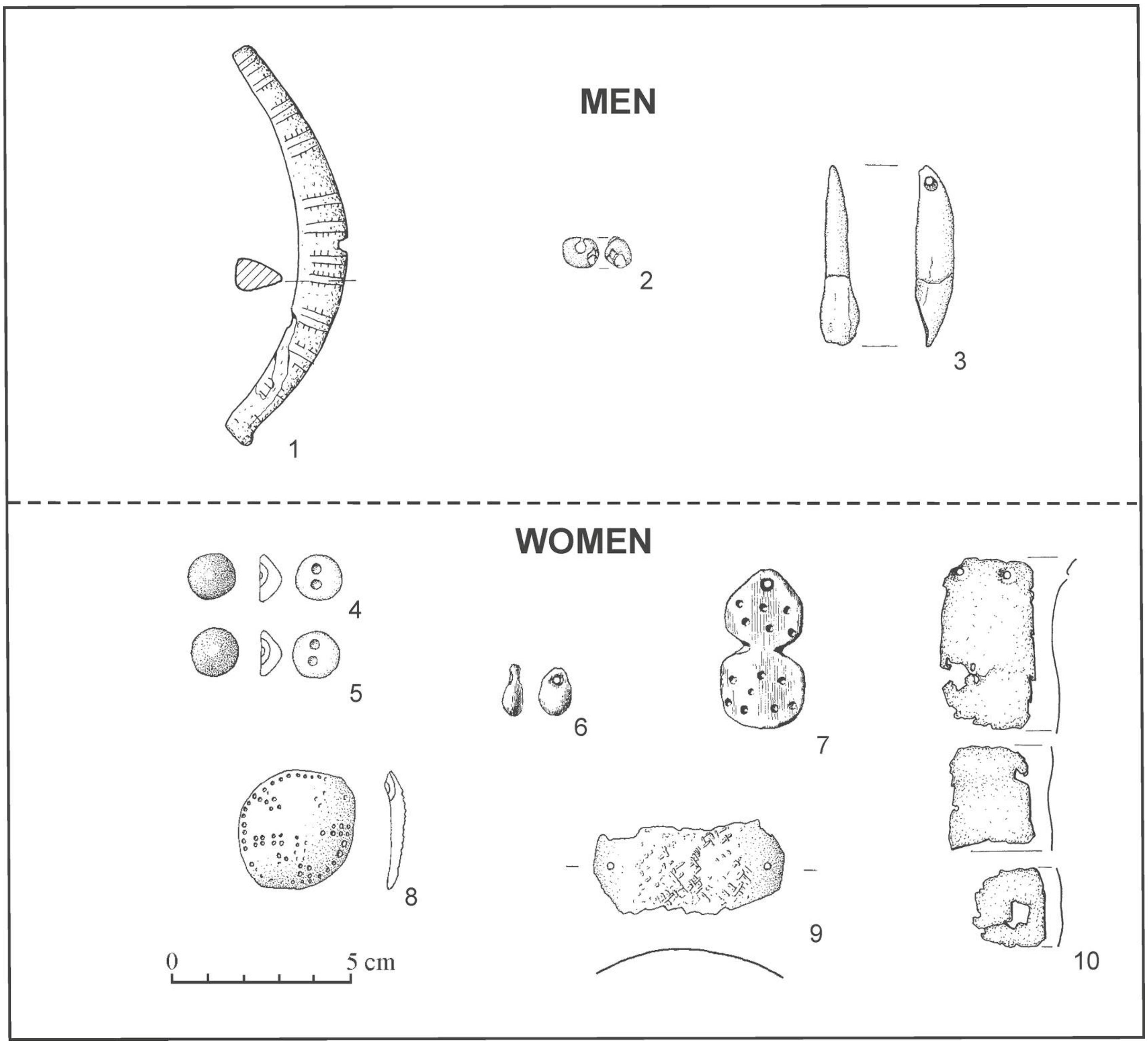


Fig. 13. Ornaments from BBC graves in the Little Poland Upland: bow-shaped pendant (1), amber bead (2), animal tooth pendant (3), bone buttons with V-shaped holes (4-5), bone or antler sack-shaped pendant (6), bone 8-shaped pendant (7), bone round plate (8), copper or electrum rectangular laminas (9-10). 1 - Samborzec, grave III; 2 – Święcice, grave 5; 3 – Złota, „Grodzisko II', grave 182; 4-5, 8 – Złota, „Nad Wawrem", grave 374; 6-7, 9 - Złota, „Nad Wawrem", grave 379; 10 – Samborzec, grave IX.

ing the BBC concentration of Little Poland as an offshoot of phenomena taking place in the central Danube river basin at the outset of the Early Bronze Age (Machnik 1979, 417-419). There were even calls for including the Polish BBC materials with those discovered in Moravia and Hungary in the single „Csepel culture" (Wojciechowski 1987, 691). However, views of this kind stem from already adopted concepts of prehistory rather than from thorough analyses of source materials. Scholars studying the Little Poland materials with greater detachment adopt more cautious views (e.g.: Harrison 1980, 61-63). In his recently published monograph of BBC, Christian Strahm links the Little Poland materials of this culture with the Bohemian BBC concentration (Strahm 1995, 11; Wiechmann 1995).

Needless to say, it would be easy to point out a number of direct ties between BBC materials from Little Poland and Moravia. Such ties are in evidence in the ceramic inventories. The bowl from grave 2 in Beradź (Żurowski 1932, 131, Fig. 12, Tabl. XXVI: 2) featuring the thickened lip ornamented with a combination of stroke motifs is typical for the Moravian BBC (e.g.: Dvořák 1992, Taf. 2: A3, 38: 4, 52: A3, B3). Likewise the jug from grave VI in Samborzec with its vertical applied strips characteristic for the Nagyrév culture has analogies among CWC and BBC

Site	Feature	Burial arrangement		Anthropological determination		Ceramic vessels																	Bow equipment				Flint workshop			Tools									Ornaments								
		Orientation	Side	Sex	Age	Bowls						Cups									Jugs	?	Lithic wristguard	Arrow-shaft smoother	Arrow-heads		Flint flakes	Retouchers		Flint striker	Flint knife	Flint side-scraper	Flint scraper+borer	Daggers		Flint splintered piece	Awls		Pendants					Laminas		Beads	
						M1	M2	M3	M4	M5	M6	K?	KZ	K2	K1 A	K1 B	K1 C	K1 D	K1 E	K1 F	Dz				Flint	Bone		Bone / antler	Pig tusk					Copper	Flint		Copper	Bone	Bow-shaped	Animal tooth	Round (solar)	8-shaped	Sack-shaped	Electrum	Copper	Common, amber	With V-shaped hole
Samborzec	III	N-S	-	♂	*Maturus*	1												1	1				1		1			1	1	X	3x			1					1								
Świniary Stare	4/1	NE-SW?	L?	?	?												1	1		1			1																								
Złota, „Grodzisko II"	182	NNE-SSW	L	♂	*Senilis*	1									1												1													1							
Beradź	5	N-S	L	♂	*Senilis*														1	1?			1	1	2		6	1	1	X	1x																
Święcice	5	N-S	L	?	?													1							10		6			X	1x					1										1	
Złota, „Grodzisko II"	173	N-S	L	?	?							1										2?			11		6			X	1x	1															
Samborzec	X	NE-SW	L	♂	*Maturus*										1				1						3	2				XX	1		1x		1x												
Samborzec	VII	N-S	L	♂	*Adultus*		1								1															X		1			1x												
Samborzec	XIII	N-S	L	♂	*Adultus*		1																																								
Samborzec	I	NE-SW	L	?	*Infans II*			1								1																															
Samborzec	II	NE-SW	L	?	*Infans II*		1									1			1																												
Samborzec	IV	NE-SW	L	?	*Infans II*		1								1	1																															
Samborzec	VIII	S-N?	?	?	*Infans I*			1	1						2																																
Złota, „Grodzisko II"	166	S-N	R	?	*child*										2												1																				
Złota, „Nad Wawrem"	377	?	?	?	*child*		1																																								
Święcice	4	S-N	R	?	?						1																	—																			
Złota, „Nad Wawrem"	386/II	cremation	-	?	Adult																		1				1?					1?															
Złota, „Nad Wawrem"	386/I	?	?	?	*child*		1					1			1																																
Beradź	1	?	?	?	?								3			3	1					2																									
Beradź	2	S-N	R	♀	*Senilis*			1										1																													
Święcice	2	?	?	?	?					1					1			1																													
Złota, „Nad Wawrem"	374	S-N	R	♀	*Senilis*	1									1			1																							1						5
Samborzec	VI	S-N	R	♀	*Maturus*										2						2																	1?									
Samborzec	IX	S-N	R	♀	*Adult./Mat.*													2																											3		
Sandomierz	31	SE-NW	R	♀	*Adult./Mat.*											2																					1										11
Złota, „Nad Wawrem"	379	S-N	R	♀	*Adultus*									1		1																										1	1		1		1
Złota, „Nad Wawrem"	381	S-N	R	♂(?)	*Adultus*										2			1																										1			3
Kraków – Krzesławice	74	?	?	?	?														1																												
Total						3	6	3	1	1	1	2	3	1	15	9	2	9	5	2	2	4?	4	1	27	2	21	2	2	7	7	3	1	1	2	1	1	1	1	1	1	1	1	1	4	1	20

Table 2. Goods from BBC graves in the Little Poland Upland.

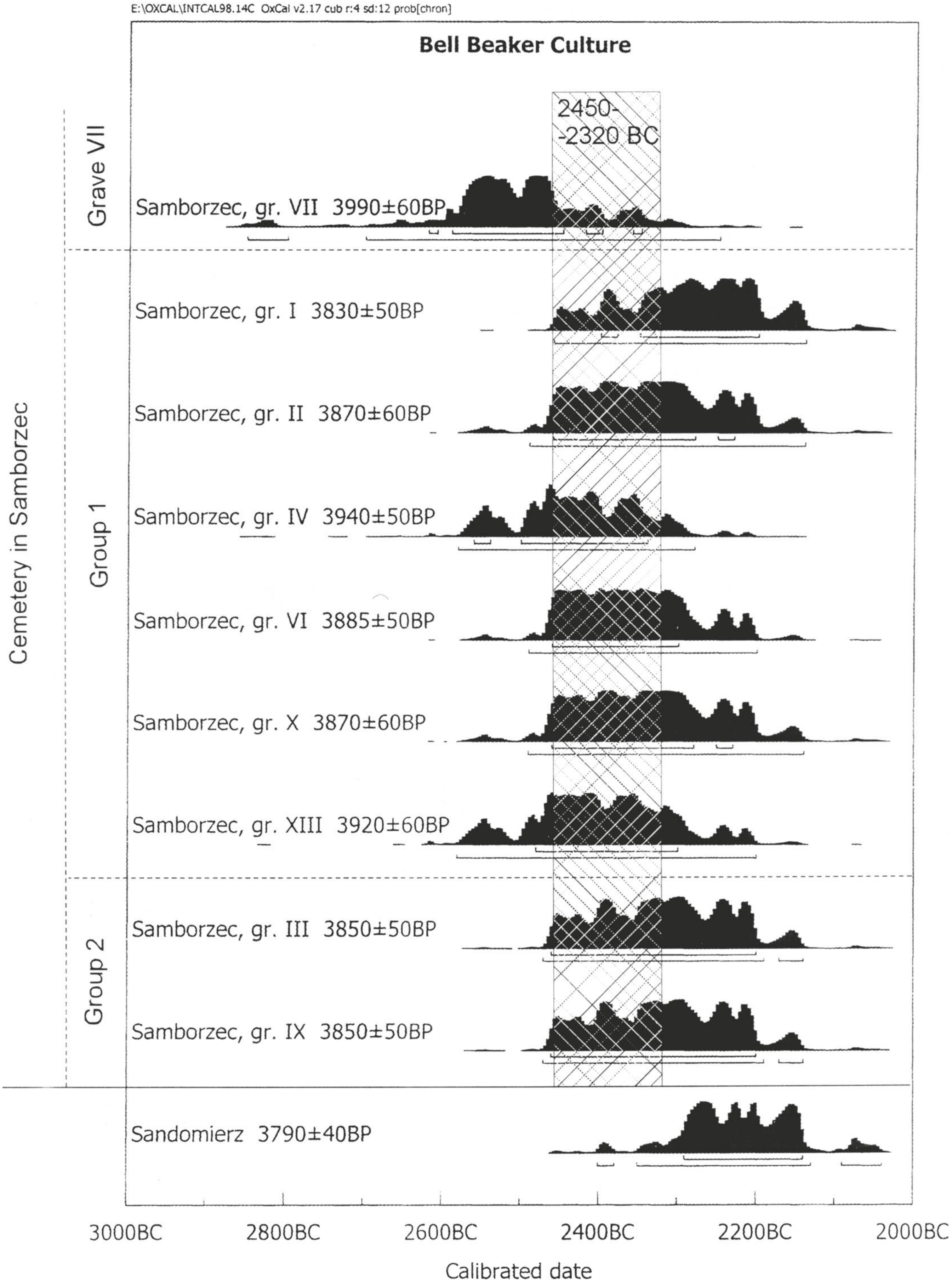


Fig. 14. Absolute dates of BBC graves in the Little Poland Upland. The hatched area represents the most likely dating of the Samborzec cemetery (obtained by "wiggle matching").

vessels from Moravia (e.g.: Dvořák 1992, Taf. 21: A3, 62: C4; Šebela 1999, Pl. 46: 1, 61: 1, 65: 2, 95: 5). Direct evidence of contacts between the two regions is also provided by the fairly numerous A-variety Jurassic flints from the vicinity of Cracow discovered in Moravia (Přichystal 1981; 1985; 1992; 1996). All this, however, does not justify any claims about genetic ties of any kind. The vessel forms encountered in Little Poland graves are widespread throughout the eastern group of BBC, but there is still no evidence of the Cracow Jurassic flint being used by the BBC community in Little Poland.

Comparisons of the flint industries of the two concentrations appears to rule out the possibility of genetic ties. The two industries differ not only as to the range of forms or processing techniques, but also in the manner of fashioning tools using flint inserts. Throughout the BBC development period in Moravia, the people of this culture used flint segments to form cutting edges of their tools, just like the people of the Early Bronze Age along the middle Danube did (Schreiber-Kalicz 1984, Taf. XL; Biró 1991, Fig. 1 and 4; Endrődi 1998, Fig. 12:5-6). This way of fashioning tools remained unchanged despite a visible evolution of technology. The segments were made in Moravia using both the blade technology (e.g. in Brno-Holáski – Oliva 1991, Fig. 8:9-10), the bifacial retouch technology (e.g. in Marefy – Škrdla / Šebela 1997), or the amorphous flake or splinter core formation technique (e.g. Holubice - Rakovský 1985, Fig. 6:6, 10–11). Meanwhile, the flint industry of the BBC community in Little Poland is homogeneous both in terms of technology and the set of forms used. Tools were always being made here with continuous cutting edges. The tool forms that were produced (knives, strikers, daggers, arrowheads) as well as the way these were used to make tools show surprisingly many similarities to solutions in the flint industries of the older Late Neolithic communities inhabiting the river basins of the upper Danube and Rhine (Honegger 2001, Fig. 143, 165; Matuschik 1999, Abb. 5; Köninger 1999, Abb. 4). The bone arrowheads and artifacts made from wild boar tusks are indicative of similar associations in bone inventories (Winiger 1992; Matuschik 1999, Abb. 8; Köninger 1999, Abb. 6). At this stage of studies it is, however, impossible to say whether these similarities are the consequence of relationships of any kind and if so, what the nature of these relationships could have been.

The presentation of BBC assemblages would not be complete without analyses of the materials left by other cultures present at the time in Little Poland. The determination of their mutual relationships should not only contribute to a more precise relative chronology but also provide data helpful in reconstructing cultural processes. Materials of the younger phase of the Cracow-Sandomierz group of CWC in Little Poland feature infrequent elements suggesting BBC influences (e.g. Fig. 16). We can mention here vessels with two decoration zones, such as on the cups from grave 1 in Beradź. Vessels bearing such ornamentation are beakers of various types, from cemeteries including Mierzanowice (Fig. 16:4; Salewicz 1937, 54, Fig. 20b), Złota (Krzak 1970, 164, Fig. 152b) and Żuków (Fig. 16: 6-7; Marciniak 1960, tabl. IV: 1). The CWC sites in Little Poland on the other hand yielded vessels with multiple decoration zones, analogous to the Bohemian and Central German forms (Buchvaldek 1986, 26, Fig. 11, and following figures). Ornamentation of this kind makes its appearance in Little Poland in the early MC phases. The Cracow-Sandomierz CWC group thus chose to adopt just one ornamentation pattern, decorating their beakers with motifs grouped in two zones on the vessels. The vessel forms typical for the BBC (bowls and cups) are found in CWC graves in the Little Poland Upland only sporadically. We know just four bowls from these graves (Tunia 1979, 72, Fig. 20; Machnikowie / Kaczanowski 1987, 90, Fig. 29: b and unpublished materials), with the vessels possibly being evidence of contacts with the BBC tradition or of ties with the Moravian or Czech CWC. A trace of BBC style in vessels morphology may be the appearance in the Little Poland Upland of beakers with a more pronounced indentation of the body, a funnel-shaped neck and unpronounced bottom, similar to the ornamented cups from grave 1 in Beradź or some of the ornamented bell beakers from Bohemia (Hájek 1968, Tab. II: 5) and Moravia (Dvořák 1992, Taf. 62: 2, 69: 7, 9; 72: 2). We know beakers of this type, classified by J. Machnik as belonging to the IIIB variety (Machnik 1966, 27), from Sośniczany (Machnik 1966, tabl. XIV: 3) and the already mentioned grave 1(2) in Żuków (Fig. 16: 6). The apparent stylistic similarities between BBC and CWC ceramics lead to a number of important conclusions. Firstly, unlike in other regions of Central Europe, the CWC groups in Little Poland adopted just a selection of specific BBC features. This could have been caused by just a brief period of contacts with a BBC community from some specific region. Secondly, when analyzing CWC materials from Little Poland, it is very difficult to distinguish between BBC influences and those of the Western CWC groups in Central Germany, Bohemia and Moravia.

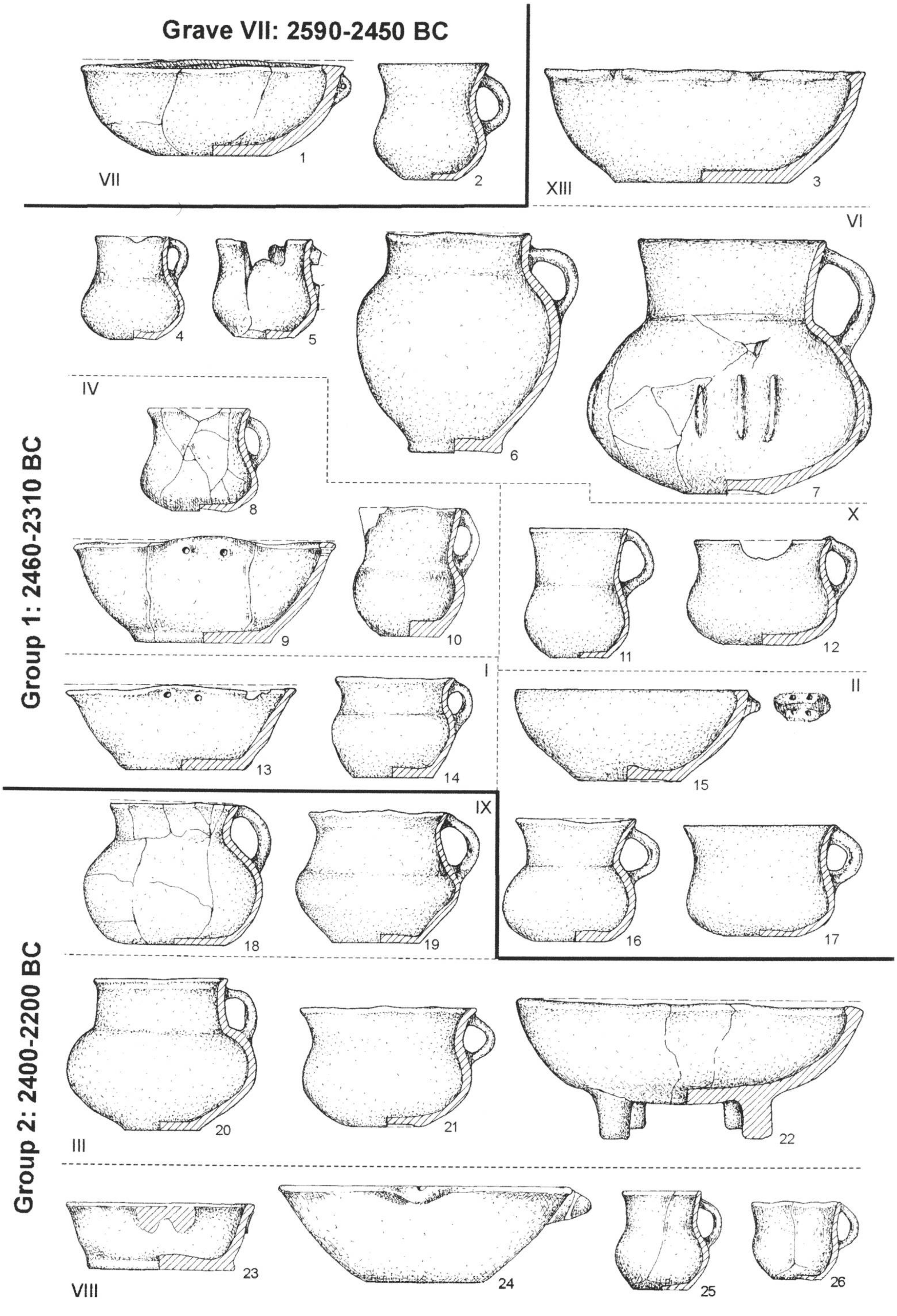

Grave VII: 2590-2450 BC
Group 1: 2460-2310 BC
Group 2: 2400-2200 BC
VII
1
2
XIII
3
VI
4
5
6
7
IV
8
X
9
10
11
12
I
13
14
II
15
IX
18
19
16
17
20
21
22
III
23
24
25
26
VIII

Fig. 15. Radiocarbon dated ceramic assemblages from BBC graves in Samborzec.

BBC influences are also rare in the non-ceramic materials of the CWC in Little Poland. It must be pointed out that a number of features seemingly indicating connections between the two cultures were already present in CWC when the local Cracow-Sandomierz group was emerging, i.e., already before the arrival of BBC communities. Many of these features make the Cracow-Sandomierz group different from other local CWC groups. One example is the N–S orientation of buried bodies — the same as in BBC but different than in most CWC groups (e.g. FISCHER 1976, 239). The Cracow-Sandomierz group is also distinct with regard to goods accompanying male inhumations, with bow equipment being important from the very beginning (WŁODARCZAK 2000). Because of all these elements, the BBC burial ritual which made its appearance in the second half of the 3rd millennium BC differs from the rituals of the local CWC tradition less significantly than in many other parts of Europe.

Markedly clearer BBC influences are discernible in the group of assemblages recently described as constituting the „proto-Mierzanowice phase" (MACHNIKOWIE / KACZANOWSKI 1987; KADROW 1991; KADROW / MACHNIK 1997). They were previously included in the so called Chłopice-Veselé culture (MACHNIK 1966; 1967; 1978), a concept no longer used. The Chłopice-Veselé culture was distinguished in the late 1960s as an „Epi-Corded Ware" unit, chronologically placed between the CWC and MC (MACHNIK 1967; 1978). Its defining characteristic was the appearance of features of the „Central-European Early Bronze Age civilization" that was to be represented by cultural groups of the Carpathian Basin and BBC (MACHNIK 1978). However, following new discoveries of materials, it turned out that it is impossible to tell apart the materials of the Chłopice-Veselé type and finds from MC assemblages (KADROW 1991). An attempt was then made to identify the oldest materials of the erstwhile Chłopice-Veselé culture to represent the initial stage of MC formation (recapitulation: KADROW / MACHNIK 1997), but the distinction of the „proto-Mierzanowice phase" as the earliest stage of MC development is also problematic. The authors of the MC division themselves admit that „it is impossible to draw a clear line between the end of the proto-Mierzanowice phase and the beginng of the early phase" (KADROW / MACHNIK 1997, 28). There is no controversy though over the early chronological position of the „proto-Mierzanowice" assemblages in MC materials. These assemblages are marked by vessels with multiple zones of horizontal cord impression ornaments (Fig. 17:1,8,18), with this manner of decoration having the closest analogies in CWC materials from Central Germany, Bohemia and Moravia where it is treated as a sign of BBC influences (BEHRENS 1965). What we thus see is the „proto-Mierzanowice" assemblages bringing to Little Poland one of the principal ornamentation styles characteristic for the BBC complex in Europe. Some other elements of „proto-Mierzanowice" grave goods also have analogies in the BBC tradition. The foremost analogy is the very presence of the characteristic cups which are by far the most dominant vessel kind. These are identical in form to vessels recovered from BBC graves (MACHNIK 1966, 143, Fig. 4). Graves dating to the „proto-Mierzanowice phase" also contain lithic wristguards (e.g. Fig. 17:6,19) and an ornamented bow-shaped pendant (ŁĘCZYCKI 1983, 69, Fig. 2:3) — artifacts particularly characteristic for BBC. The „proto-Mierzanowice" assemblages display also clear ties to cultural traditions in areas south and east of the Little Poland Upland. Examples of the former features are jugs with analogies to similar vessels in cultures occupying the Carpathian Basin, while direct contacts with eastern CWC groups are evidenced by surprisingly numerous imports of Volhynian flint artifacts. We also have features of as yet unclear origin. Coming together with the „proto-Mierzanowice" assemblages was the new custom of arranging bodies in graves along the W-E axis. The origin of some artifacts is also hard to determine, one example here being the copper dagger discovered in grave 13/63 in Cracow-Mogiła, "Kopiec Wandy" (Fig. 17:12).

An important role in determining the chronology of the phenomena discussed here is played by mixed assemblages containing CWC vessels alongside the typically „proto-Mierzanowice" pottery (Fig. 18). Assemblages of this kind were discovered in Nikisiałka Duża (ŚCIBIOR / ŚCIBIOR 1986) and Średnia in the Podkarpacie region (JAROSZ 2002), providing part of the evidence that the younger CWC phase was contemporary with the „proto-Mierzanowice phase". More evidence of this are radiocarbon determinations from „proto-Mierzanowice" graves (including one from the Little Poland Upland), dating the phase to ca. 2450–2300 BC (WŁODARCZAK 1998, 41-42). These datings as well as the small number of „proto-Mierzanowice" assemblages suggest that the latter should not be treated as a distinct cultural unit but rather as a stylistic trend within the emerging MC, contemporary with the late phase of the Cracow-Sandomierz CWC group and bearing a clear stamp of the BBC.

Traces of the early MC phase in Little Poland differ from all those of the other described units in degree

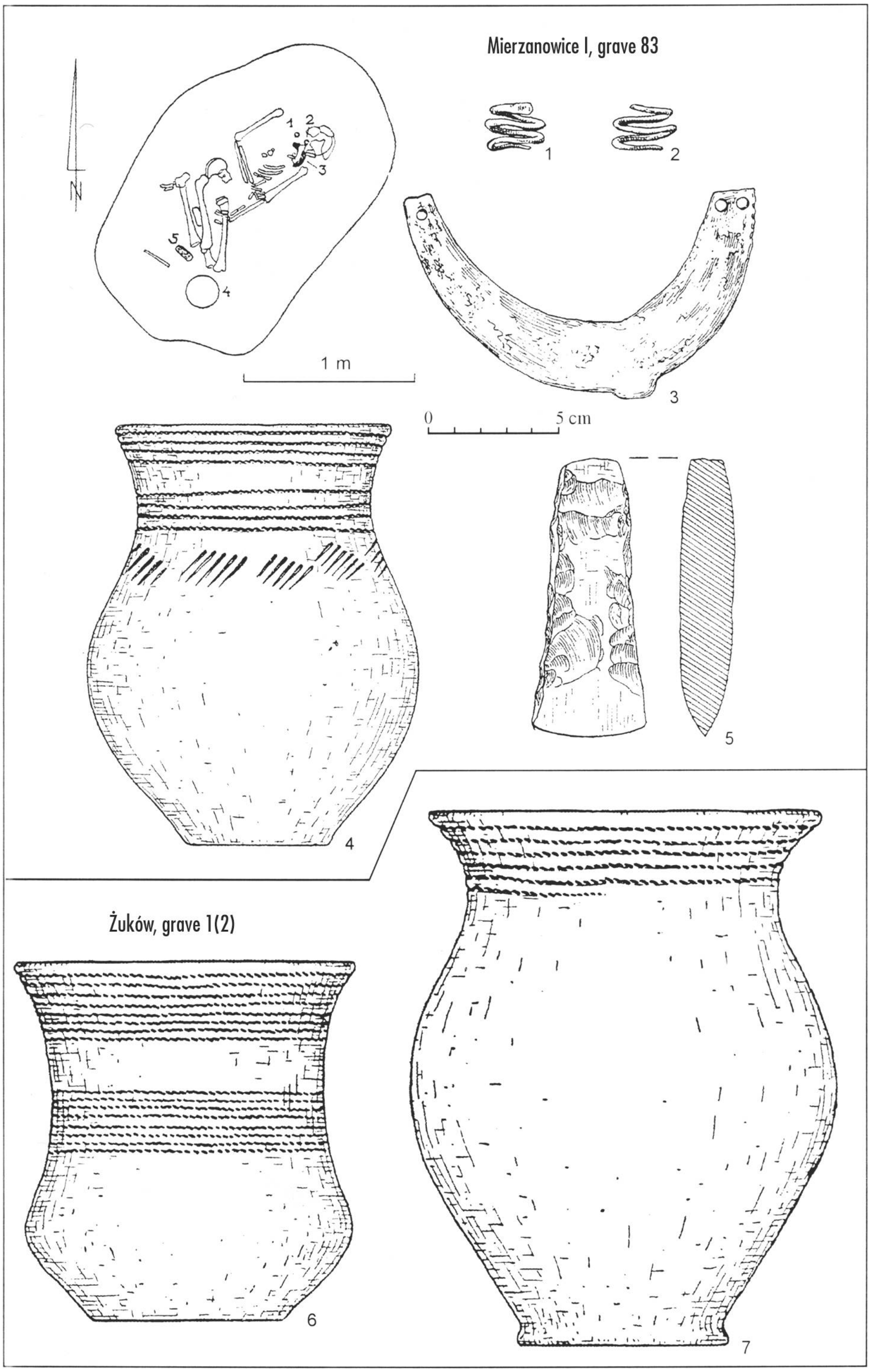

Mierzanowice I, grave 83
N
1
2
3
4
5
1 m
0
5 cm
Żuków, grave 1(2)
6
7

Fig. 16. Examples of stylistic influences exerted by the BBC on the Cracow-Sandomierz CWC group: inventory of grave 83 in Mierzanowice and ceramic artifacts from grave 1[2] in Żuków. After Salewicz 1937 and Marciniak 1960.

of settlement stabilization (bigger cemeteries and the presence of large settlements) (Machnikowie / Kaczanowski 1987; Kadrow 1991; 1995; Kadrow / Machnikowie 1992; Kadrow / Machnik 1997). BBC influences are apparent in sites which may be dated to the early and beginning of the classical phase of MC. The most important sites dating from this period are the cemeteries in Iwanowice (Machnikowie / Kaczanowski 1987; Kadrow / Machnikowie 1992), Mierzanowice (Salewicz 1937; Kadrow / Machnik 1997), Świniary Stare (Kraussowie 1971), Miernów – kopiec II (Kempisty 1978) and Żerniki Górne (Kempisty 1978; Włodarczak 1998). Analyses of the burial rituals there led to the conclusion that MC is of Epi-Corded Ware character (e.g.: Machnik 1966, 135–144; 1967; Kadrow 1994; 1995; 2001). Ties to the CWC tradition are indicated primarily by the arrangement of the dead in graves (men lying on their right and women on their left side, arm arrangements, body trunk lying on the back). Analogies between CWC and MC are also clearly visible in features of the grave goods and this suggests that MC emerged as a result of cultural transformations within CWC. Radiocarbon dating of the cemetery in Żerniki Górne indicate that this process took place ca. 2400/2300-2200 BC (Kadrow / Machnik 1997, 26–27; Kempisty / Włodarczak 2000, 171, Table 34; Włodarczak 1998). Assemblages of the early MC phase contain relatively numerous cups which are traditionally seen as a result of ties with BBC (e.g.: Machnik 1966; 1967; 1978; Kadrow 2001). Like the vessels from the "proto-Mierzanowice phase", these cups are often decorated with multiple zones of horizontal cord impressions. However, the vertical cord impression ornamentation typical for the early phase of MC may suggest also connections with a cultural tradition other than BBC. Ties with the BBC tradition are discernible ornaments which include bone plates, copper plates and rings, and also wild boar tusk pendants. The commencement of production of Czerni-czyn-type bifacial flint daggers (featuring a tang and often also lateral notches for handle attachment – Libera 2001, 127) may probably also be treated as a result of BBC influences on MC. All told, however, the analogies to BBC inventories apparent in materials included in the early phase of MC appear to be rather few in number, with some of them seeming to originate outside Little Poland.

As we can see from the above remarks, the assessed chronological position of BBC in the Little Poland Upland creates a number of problems in interpretations of prehistory. Typological analyses of artifacts reveal BBC influences on both the younger phase of the Cracow-Sandomierz CWC group and on the early phase of MC (the „proto-Mierzanowice" assemblages in particular). At the same time, the stylistic homogeneity of the studied assemblages does not allow us to assume a long presence of BBC in the region in question, synchronous with the development of all of the mentioned cultural groups (ca. 2500-2000 BC). A series of radiocarbon dates indicated a relatively early appearance of BBC in Little Poland, namely around 2450-2400 BC (Fig. 19). The BBC influences discernible in materials discovered in Little Poland thus appear to have lasted more than the physical presence of representatives of this culture in the region. This in turn forces us to adopt the hypothesis that towards the end of the 3rd milenium BC the direct influences of the BBC population in Little Poland were replaced by similar influences emanating from neighboring regions (such as Moravia). This hypothesis appears to be substantiated by some of the previously mentioned detailed observations.

The BBC assemblages in Little Poland appear to date to a period just slightly before the oldest assemblages included in MC and because of this the cultural processes taking place at the time cannot be presented as a simple sequence of events, from CWC settlement, through the emergence of BBC, the appearance of a mixed CWC/BBC group, all the way to the consolidation of the Early Bronze Age MC. The appearance of BBC in Little Poland is soon followed by a period of fundamental cultural change, lasting about 150 years, eventually leading to the replacement of the local Cracow-Sandomierz CWC group by the MC tradition. This period saw the coexistence of assemblages which are today being classified as belonging to the late phase of CWC, the BBC and various stylistic trends of the early phase of MC.

The main issue to consider is thus the role of BBC in the above process. The Polish literature of the subject has generally adopted J. Machnik's view that „the BBC people in Little Poland must be viewed as the first to spread the new features of the Central European Early Bronze Age civilization north of the Carpathians and the Sudeten Mountains." (Machnik 1979, 417). Our previous remarks indicate that there is no material evidence to substantiate this view. The BBC assemblages are extremely similar to CWC ones in terms of both settlement structure (small cemeteries) and rigorously adhered-to rules of furnishing graves. Some of the burial ritual differences (e.g. in rules of arrangement and orientation of bodies in

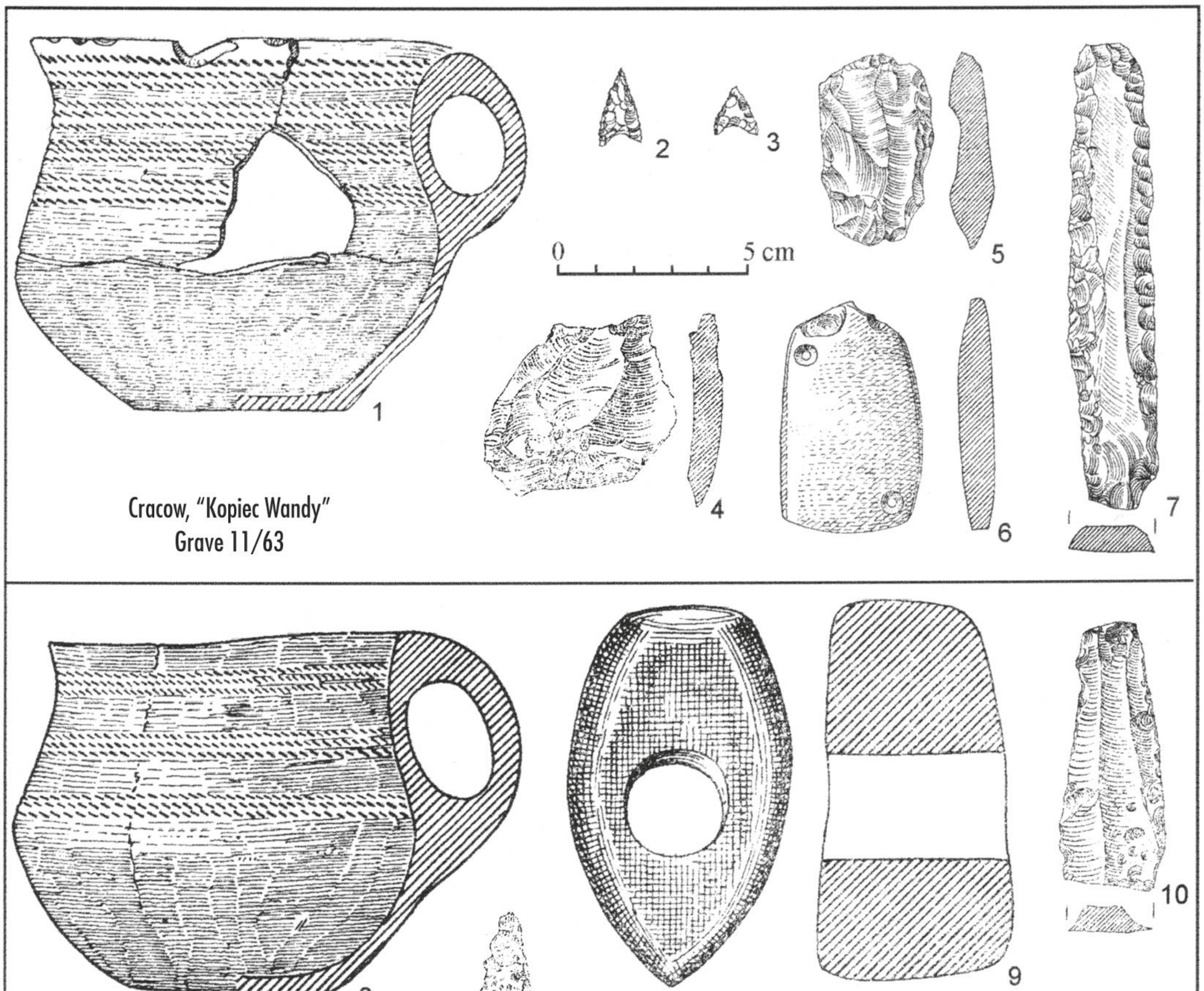

1
2
3
0
5 cm
5
4
6
7
Cracow, "Kopiec Wandy"
Grave 11/63
8
9
10
11
12
13
14
15
16
17
Cracow, "Kopiec Wandy"
grave 13/63
18
19
20
21
Święcice, grave 3

Fig. 17. Grave assemblages of the so called „proto-Mierzanowice phase" from Cracow-Mogiła, „Kopiec Wandy" and Święcice. After Hachulska-Ledwos 1967 and Prokopowicz 1964.

graves) are not of qualitative nature but serve to underline the opposition of the two cultural systems (Fischer 1976). If the BBC community in Little Poland did indeed play a role in shaping the local Early Bronze Age settlement, it could have only been that of a catalyst of ongoing processes. It is not easy to determine the actual nature of this function. Observations made in the course of analyses of interregional ties of BBC communities in Little Poland may prove important in this context. There are surprisingly many

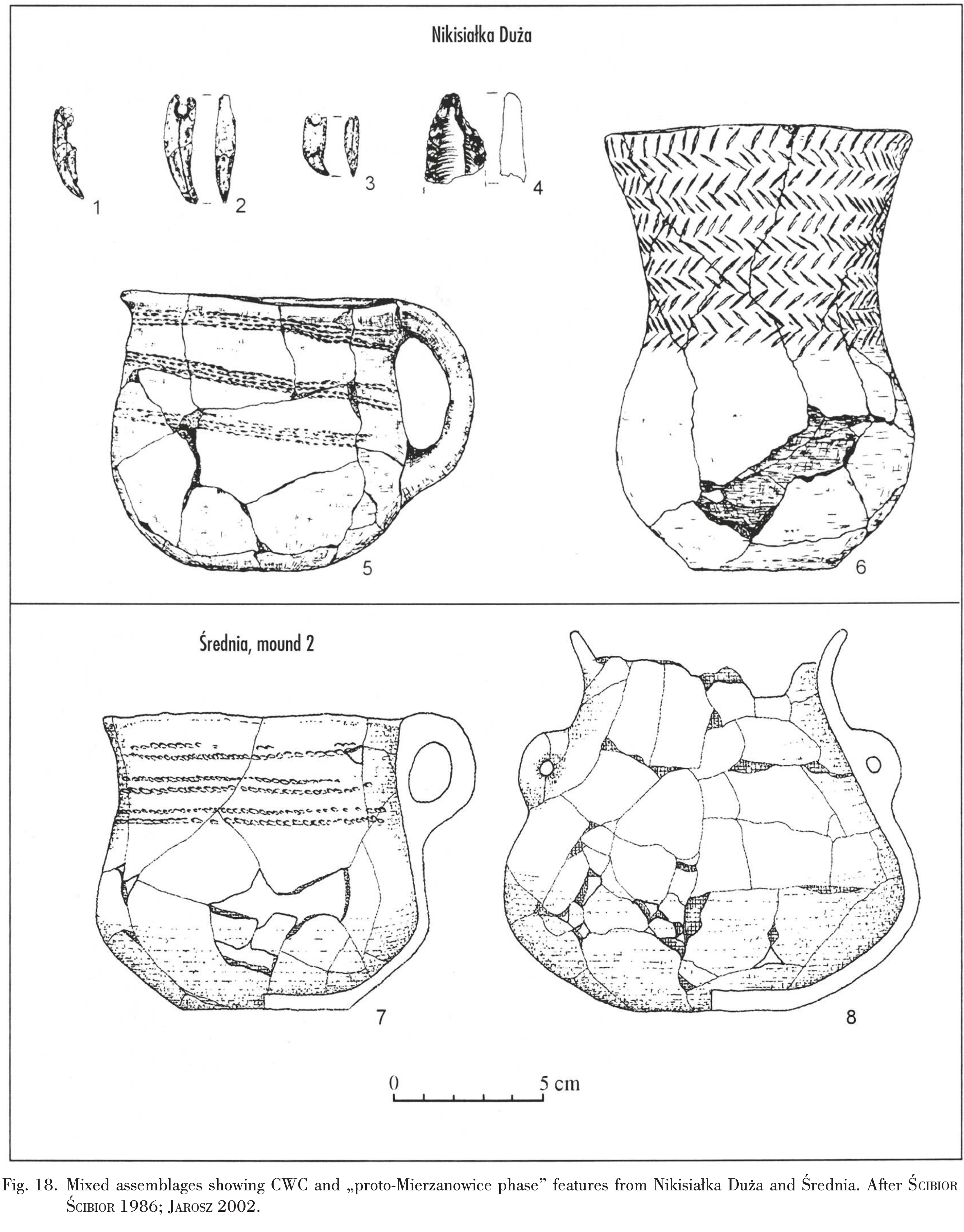


Fig. 18. Mixed assemblages showing CWC and „proto-Mierzanowice phase" features from Nikisiałka Duża and Średnia. After Ścibior / Ścibior 1986; Jarosz 2002.

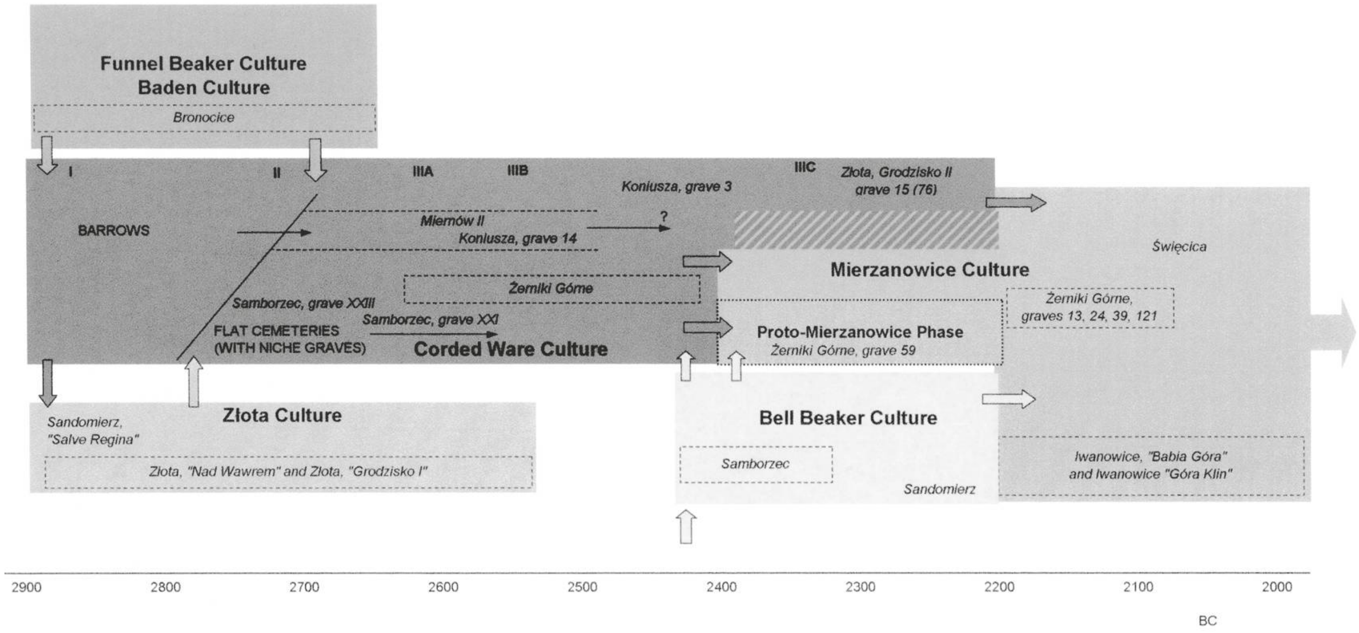

Funnel Beaker Culture
Baden Culture
Bronocice
I
II
IIIA
IIIB
IIIC
Konlusza, grave 3
Złota, Grodzisko II
grave 15 (76)
BARROWS
Miernów II
Konlusza, grave 14
?
Żerniki Górne
Samborzec, grave XXIII
Samborzec, grave XXI
FLAT CEMETERIES
(WITH NICHE GRAVES)
Corded Ware Culture
Mierzanowice Culture
Święcica
Żerniki Górne,
graves 13, 24, 39, 121
Proto-Mierzanowice Phase
Żerniki Górne, grave 59
Złota Culture
Sandomierz,
"Salve Regina"
Złota, "Nad Wawrem" and Złota, "Grodzisko I"
Bell Beaker Culture
Samborzec
Sandomierz
Iwanowice, "Babia Góra"
and Iwanowice "Góra Klin"
2900
2800
2700
2600
2500
2400
2300
2200
2100
2000
BC

Fig. 19. Chronology of cultural phenomena in the Little Poland Upland during the 3rd millennium BC (based on radiocarbon dating).

close analogies to Little Poland materials in inventories from other settlement regions of the eastern group. These include both single artifacts and, less often, entire assemblages. However, the analogies are not concentrated in any single area. As a result, each settlement concentration is marked by a distinct set of features, with clear differences apparent even between individual cemeteries. This situation appears to stem from the way BBC communities of the eastern group were organized, which was very different from the organization of regional groups of CWC. In CWC the character of the various groups is determined by local stylistic modifications of supra-regional trends, while evidence of long-range exchange are rare. The decisive factor in BBC on the other hand is the intensity of the presence of the various elements, which often seem to be objects of long-range exchange. One cannot rule out that the transplantation to Little Poland of this seemingly insignificant variability is what triggered the entire process of cultural change.

The pattern of cultural transformations presented above is quite different from the model developed in the 1970s to illustrate the situation in Holland (Lanting / Van Der Vaals 1976). This leads us to two conclusions. First, in order to understand the changes taking place in central Europe halfway through the 3rd millennium BC, we need studies going well beyond analyses of assemblages containing ornamented bell beakers. We must precisely define the relationships at the interface between influences spreading north along the Danube and Rhine and transformations simultaneously taking place within the entire CWC tradition. Second, no useful discussion of the BBC phenomenon will be possible until we thoroughly sort out and date materials from the various regional settlement concentrations.

ACKNOWLEDGEMENTS

We wish to thank Barbara Burchard, Jadwiga Kamieńska and Anna Kulczycka-Leciejewiczowa for making available the results of excavations in Samborzec. We are likewise grateful to Elżbieta Chochorowska, Radosław Liwoch, Andrzej Matoga, Irena Pieróg of the Archaeological Museum in Cracow and Barbara Matraszek, Sławomir Sałaciński of the State Archaeological Museum in Warsaw for their help in accessing archival data. Our thanks are due to the Foundation of the Friends of the Institute of Archaeology of Warsaw University for financing the radiocarbon dating of graves from the Samborzec cemetery, and to Janusz Czebreszuk for providing financial support for the preparation of illustrations (project no. 1 H01H 019 17, financed by Polish Committee of Scientific Research).

Translated by Andrzej Lewandowski

References

Baczyńska B. 1994. *Cmentarzysko kultury mierzanowickiej w Szarbi, woj. kieleckie. Studium obrządku pogrzebowego*. Kraków.

Bátora J. 1991. The reflection of economy and social structure in the cemeteries of the Chłopice-Veselé and Nitra Cultures. *Slovenská Archeológia* 39, 91–141.

Behrens H. 1965. Westeuropäische Einflüsse im mitteldeutschen Neolithikum. *Ausgrabungen und Funde* 10, 16–20.

Biró K. T. 1991. Bell-Beaker Culture Lithic Implements from Hungary. *Acta Archaeologica Carpathica* 30, 87–96.

Borkowski W. 1987. Neolithic and Early Bronze Age Heart–shaped Arrow–heads from the Little Poland Upland. In: Kozłowski J.K. / Kozłowski S.K. (eds.), *New in Stone Age Archaeology*. Archaeologia Interregionalis 8, 147–181. Warszawa – Kraków.

Bronk Ramsey C. 1995. Radiocarbon calibration and analysis of stratigraphy. The OxCal Program. *Radiocarbon* 37/2, 425–430.

Bruchhaus H. / Neubert A. 1999. Zur Rekonstruktion endneolitischer und frühbronzezeitlischer Bevölkerungen im Mittelelbe-Saale-Gebiet – Ergebnisse einer ersten Bestandsaufnahme. In: Müller J. (ed.), Radiokarbonchronologie – Keramiktechnologie – Osteologie – Anthropologie – Raumanalysen, Beiträge zum Neolithikum und zur Frühbronzezeit im Mittelelbe-Saale-Gebiet. Teil 1. *Bericht der Römisch-Germanischen Komission* 80, 122–161.

Buchvaldek M. 1986. *Kultura se šňůrovou keramikou ve středni Evropě. I. Skupiny mezi Harcem a Bílými Karpaty*. Praehistorica 12. Praha.

Buchvaldek M. 1990. Pohřebiště lidu se zvoncovitými poháry. In: Buchvaldek M. / Zeman J. (eds.), *Lochenice. Z archeologických výzkumů na katastru obce*. Praehistorica 16, 29–49. Praha.

Budziszewski J. 1991. Krzemieniarstwo ludności Wyżyny Środkowomałopolskiej we wczesnej epoce brązu. In: Gurba J. (ed.), *Schyłek neolitu i epoka brązu w Polsce Środkowowschodniej (materiały z konferencji)*, 181–208. Lublin.

Budziszewski J. 1998. Świętokrzyski Okręg Pradziejowej Eksploatacji Krzemieni w dobie kultury trzcinieckiej. In: Kośko A. / Czebreszuk J. (eds.), *„Trzciniec" – system kulturowy czy interkulturowy proces?*, 285–299. Poznań.

Budziszewski J. / Tunia K. 2000. A grave of the Corded Ware Culture arrowheads producer in Koniusza, southern Poland. Revisited. In: Kadrow S. (ed.), *A Turning of Ages. Im Wandel der Zeiten. Jubilee Book Dedicated to Professor Jan Machnik on His 70th Anniversary*, 101–135. Kraków.

Chochorowski J. 1976. Pochówek szkieletowy kultury ceramiki sznurowej z Kietrza, woj. Opole. *Sprawozdania Archeologiczne* 28, 125–131.

Dvořák P. 1992. *Die Graberfelder der Glockenbecherkultur on Mähren (Bez. Blansko, Brno – město, Brno – venkov). Katalog der Funde I*. Brno.

Endrődi A. 1998. Results of Settlement Archaeology in Bell Beaker Culture Research in Hungary. In: Benz M. / Willigen S. Van (eds.), *Some New Approaches to the Bell Beaker „Phenomenon". Lost Paradise...?* Proceedings of the 2nd Meeting of the "Association Archéologie et Gobelets" Feldberg (Germany), 18th–20th April 1997. BAR International Series 690, 141–160. Oxford.

Fischer U. 1976. Die Dialektik der Becherkulturen. *Jahreschrift für mitteldeutsche Vorgeschichte* 60, 235–245.

Gleń-Haduch E. 1990. Szkielety z okresu kultury pucharów dzwonowatych z Samborca (woj. tarnobrzeskie). *Materiały i Prace Antropologiczne* 111, 129–144.

Hachulska-Ledwos R. 1967. Materiały kultury ceramiki sznurowej odkryte koło Kopca Wandy (Kraków-Nowa Huta). *Materiały Archeologiczne* 7, 89–103.

Haduch E. 1997. *Ludność kultury mierzanowickiej z Szarbi, woj. kieleckie na tle populacji środkowoeuropejskich z wczesnego okresu epoki brązu*. Kraków.

Haduch E. / Szostek K. / Głąb H. 1997. Cribra orbitalia and Trace Element in Human Teeth from Neolithic and Early Bronze age Graves in Southern Poland. *American Journal of Physical Anthropology* 103, 201–207.

Hájek L. 1966. Die älteste Phase der Glockenbecherkultur in Böhmen und Mähren. *Památky archeologické* 57, 210–241.

Hájek L. 1968. *Kultura zvoncovitých pohárů v Čechách*. Archeologické studijní materiály 5. Praha.

Harrison R.J. 1980. *The Beaker Folk. Copper Age archaeology in Western Europe*. London.

Häusler A. 1966. Zum Verhältnis von Männern, Frauen und Kindern in Gräbern der Steinzeit. *Arbeits- und Forschungsberichte zur sächsischen Bodendenkmalpflege* 14/15, 25–73.

Havel J. / Pavelková J. 1989. Pohřební ritus a antropologické zhodnocení populační skupiny kultury zvoncovitých pohárů z území Čech. *Archaeologia Pragensia* 10, 5–56.

Honegger M. 2001. *L'industrie lithique taillée du Néolithique moyen et final de Suisse*. Collection de Recherches Archéologiques (CRA) – Monographies, n° 24. Paris.

Jarosz P. 2002. Kurhan kultury ceramiki sznurowej w Średniej, st. 3, pow. Przemyśl – wyniki badań wykopaliskowych prowadzonych w 2001 r. *Rocznik Przemyski* 38/2, 3–21.

Kadrow S. 1991. *Iwanowice. Stanowisko Babia Góra, część I. Rozwój przestrzenny osady z wczesnego okresu epoki brązu*. Kraków.

Kadrow S. 1994. From nomadism to the sedentary way of life. A case of the evolution of the late neolithic and the early bronze age communities in south-eastern Poland: 2900–1650 BC. In: A. Kośko (ed.), *Nomadism and Pastoralism in the Circle of Baltic-pontic Early Agrarian Cultures: 5000–1650 BC*. Baltic-Pontic Studies 2, 71–85.

Kadrow S. 1995. *Gospodarka i społeczeństwo. Wczesny okres epoki brązu w Małopolsce*. Kraków.

Kadrow S. 2001. *U progu nowej epoki. Gospodarka i społeczeństwo wczesnego okresu epoki brązu w Europie Środkowej*. Kraków.

Kadrow S. / Górski J. 2001. Die frühe und ältere Bronzezeit in Kleinpolen im Lichte der Radiokarbondatierungen (mit einigen Bemerkungen zu ausgewählten Fundstellen in der Ukraine. In: Czebreszuk J. / Müller J. (eds.), *The absolute chronology in central Europe during the 3rd millenium BC*, 131–176. Poznań - Bamberg - Rahden/Westf.

Kadrow S. / Machnik J. 1997. *Kultura mierzanowicka. Chronologia, taksonomia i rozwój przestrzenny*. Kraków.

Kadrow S. / Machnikowie A. & J. 1992. *Iwanowice. Stanowisko Babia Góra, część II. Cmentarzysko z wczesnej epoki brązu*. Kraków.

Kamieńska J. / Kulczycka A. 1964. Przyczynek do znajomości kultury pucharów dzwonowatych w Polsce. In: Nosek S. (ed.), *Studia i materiały do badań nad neolitem Małopolski*. Prace Komisji Archeologicznej PAN - Oddział w Krakowie 4, 373–395. Wrocław - Warszawa - Kraków.

Kamieńska J. / Kulczycka-Leciejewiczowa A. 1964. Quelques remarques sur la civilisation des vases campaniformes en Pologne. *Archaeologia Polona* 7, 96–113.

Kamieńska J. / Kulczycka-Leciejewiczowa A. 1970. The Bell Beaker Culture. In: Wiślański T. (ed.), *The Neolithic in Poland*, 366–382. Wrocław - Warszawa - Kraków.

Kapica Z. 1958. *Szkice z antropologii Polski i ziem ościennych, cz. I, Serie neolityczne.* Acta Anthropologica Universitatis Lodziensis. Łódź.

Kaufmann D. 1969. Zwei Gräber der Glockenbecherkultur mit Holzeinbauten von Löbnitz, Kr. Staßfurt. *Ausgrabungen und Funde* 14, 27–31.

Kempisty A. 1978. *Schyłek neolitu i początek epoki brązu na Wyżynie Małopolskiej w świetle badań nad kopcami*. Warszawa.

Kempisty A. / Włodarczak P. 2000. *Cemetery of Corded Ware culture in Żerniki Górne*. Warszawa.

Köninger J. 1999. Nußdorf - Strandbad – Das Fundmaterial der Horgener Siedlung an der Liebesinsel, Überlingen - Nußdorf, Bodenseekreis. In: Schlichtherle H. / Strobel M. (eds.), *Aktuelles zu Horgen – Cham – Goldberg III – Schnurkeramik in Süddeutschland*. Rundgespräch Hemmenhofen 26. Juni 1998. Hemmenhofener Skripte 1, 19–30. Gaienhofen-Hemmenhofen.

Kopacz J. / Pelisiak A. 1991. From Studies on Utilization of Flint Raw Material in the Neolithic of Little Poland. In: Jankowska D. (ed.), *Die Trichterbecherkultur. Neue Forschungen und Hypothesen*. Material des Internationalen Symposiums, Dymaczewo, 20–24 September 1988. Teil 2, 163–172. Poznań.

Kowalewska-Marszałek H. / Cyngot D. 1989. Grób kultury pucharów dzwonowatych ze Wzgórza Zawichojskiego w Sandomierzu. *Sprawozdania Archeologiczne* 40, 129–141.

Krauss A. 1964. Grób kultury pucharów dzwonowatych odkryty w 1959 r. w Świniarach Starych, pow. Sandomierz. In: Nosek S. (ed.), *Studia i materiały do badań nad neolitem Małopolski*. Prace Komisji Archeologicznej PAN – Oddział w Krakowie 4, 411–415. Wrocław - Warszawa - Kraków.

Krauss J. 1971. Piąty grób kultury pucharów dzwonowatych w Święcicach, pow. Miechów. *Materiały Archeologiczne* 12, 264–266.

Kraussowie A. and J. 1971. Cmentarzysko kultury mierzanowickiej w Świniarach Starych, pow. Sandomierz. *Materiały Archeologiczne* 12, 109–131.

Krzak Z. 1970. *Cmentarzysko kultury złockiej „Nad Wawrem" w Złotej*. Wrocław - Warszawa - Kraków.

Langová J. / Rakovský I. 1981. Objekty kultury zvoncovitých pohárů z Jezeřan – Maršovic. *Archeologické rozhledy* 33/1, 19–34.

Lanting J.N. / Van Der Vaals J.D. 1976. Beaker Culture relation in the Lower Rhine Basin. In: Lanting J.N. / Van Der Vaals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 1–80. Bussum-Haarlem.

Libera J. 2001. *Krzemienne formy bifacjalne na terenach Polski i zachodniej Ukrainy (od środkowego neolitu do wczesnej epoki żelaza).* Lublin.

Łęczycki S. W. 1983. Zespół obiektów kultury Chłopice-Veselé z Kietrza, woj. Opole, stan. D. *Sprawozdania Archeologiczne* 34, 67–76.

Machnik J. 1966. *Studia nad kulturą ceramiki sznurowej w Małopolsce*. Wrocław - Warszawa - Kraków.

Machnik J. 1967. Stosunki kulturowe na przełomie neolitu i epoki brązu w Małopolsce (na tle przemian w Europie Środkowej). In: Hensel W. (ed.), *Materiały do prahistorii ziem polskich. III/1 – Epoka brązu*. Warszawa.

Machnik J. 1978. Wczesny okres epoki brązu. In: Gardawski A. / Kowalczyk J. (eds.), *Prahistoria Ziem Polskich. III. Wczesna epoka brązu*, 9–136. Wrocław - Warszawa - Kraków - Gdańsk.

Machnik J. 1979. Plemiona kultury pucharów dzwonowatych, In: Hensel W. / Wiślański T. (eds.), *Prahistoria Ziem Polskich. II. Neolit*, 413–419. Wrocław - Warszawa - Kraków - Gdańsk.

Machnik J. 1999. Radiocarbon chronology of the Corded Ware Culture on Grzęda Sokalska. A Middle – Dnieper traits perspective. In: A. Kośko (ed.), *The Foundations of Radiocarbon Chronology of Cultures between the Vistula and Dnieper: 3150–1850 BC*. Baltic-Pontic Studies 7, 221–250.

Machnikowie A. i J. / Kaczanowski K. 1987. *Osada i cmentarzysko z wczesnego okresu epoki brązu na „Górze Klin" w Iwanowicach.* Wrocław - Warszawa - Kraków - Gdańsk - Łódź.

Marciniak J. 1960. Materiały neolityczne z Żukowa, pow. Sandomierz. *Materiały Archeologiczne* 2, 43–55.

Matuschik I. 1999. Riekofen und die Chamer Kultur Bayerns. In: Schlichtherle H. / Strobel M. (eds.), *Aktuelles zu Horgen – Cham – Goldberg III – Schnurkeramik in Süddeutschland.* Rundgespräch Hemmenhofen 26. Juni 1998. Hemmenhofener Skripte 1, 69–95. Gaienhofen-Hemmenhofen.

Michniak R. / Budziszewski J. 1995. Siliceous rocks of the North-Eastern Mesozoic margin of the Holy Cross Mountains. In: Budziszewski J. / Michniak R. (eds.), *VIIth International Flint Symposium Warszawa-Ostrowiec Świętokrzyski, 4–8 September 1995. Guide Book of excursion. Northern Footslopes of Holy Cross Mountains, 11–19.* Warszawa.

Oeftiger C. 1999. Ein schnurkeramischer Begräbnisplatz bei Lauda-Königshofen, Main-Tauber-Kreis. *Archäologische Ausgrabungen in Baden-Württemberg* 1998, 62–64.

Oliva M. 1991. Štípaná industrie KZP z pohřebiště v Brně-Holáskách. *Časopis moravského musea v Brně* 76, 57–60.

Přichystal A. 1981. Surovinové zhodnocení kamenných artefaktů z hrobu kultury zvoncovitých pohárů v Jezeřanech – Maršovicích (okr. Znojmo). *Archeologické rozhledy* 33/1, 36.

Přichystal A. 1985. Petroarcheologický rozbor štípané a broušené industrie z pohřebiště nitranské skupiny a kultury zvoncovitých pohárů v Holešově. In: Ondráček J. / Šebela L., *Pohřebiště nitranské skupiny v Holešově (Katalog nálezů).* Studie muzea kroměřížka '85, 185–187.

Přichystal A. 1992. Petrological Expert's Report. In: Dvořák P., *Die Gräberfelder der Glockenbecherkultur in Mähren (Bez. Blansko, Brno-město, Brno-venkov). Katalog der Funde I*, 48. Brno.

Přichystal A. 1996. Petrographische Gutachten. In: Dvořák P. et al., *Gräberfelder der Glockenbecherkultur in Mähren (Bezirk Břeclav). Katalog der Funde II*, 72–73. Brno-Olomouc.

Prokopowicz J. 1964. Groby kultury pucharów dzwonowatych w Święcicach, pow. Miechów. In: Nosek S. (ed.), *Studia i materiały do badań nad neolitem Małopolski*. Prace Komisji Archeologicznej PAN – Oddział w Krakowie 4, 401–409. Wrocław - Warszawa - Kraków.

Rakovský I. 1985. Sidliště kultury zvoncovitých pohárů v Holubicích, *Archeologické rozhledy* 37/4, 377–389.

Salewicz K. 1937. Tymczasowe wyniki badań prehistorycznych w Mierzanowicach (pow. opatowski, woj. kieleckie). *Z otchłani wieków* 12, 39–59.

Schmidt-Thielbeer 1955. Ein Friedhof der frühen Bronzezeit bei Nohra, Kr. Nordhausen. *Jahresschrift für mitteldeutsche Vorgeschichte* 39, 93–114.

Schreiber-Kalicz R. 1984. Komplex der Nagyrév-Kultur. In: Tasić N. (ed.*), Kulturen der Frühbronzezeit des Karpatenbeckens und Nordbalkans*. Balcano-Pannonica 22, 133–190.

Ścibior J.M. / Ścibior J. 1986. Obiekt grobowy z Nikisiałki Dużej, gm. Opatów. *Sprawozdania Archeologiczne* 38, 129–138.

Šebela L. 1999. *The Corded Ware Culture in Moravia and in the adjacent part of Silesia (Catalogue)*. Brno.

Sedlaczek-Komorowski L. 1935. Człowiek kultury pucharów dzwonowatych w Polsce. *Wiadomości Archeologiczne* 13, 109–122.

Shennan S. J. / Wilcock J. D. 1975. Shape and Style Variation in Central German Bell Beakers: A Computer-assisted Study. *Science and Archaeology* 15, 17–31.

Škrdla P. / Šebela L. 1997. Pozdně eneolitické složené dýky na Moravě. *Přehled výzkumů 1993–1994*, 77–86.

Strahm C. 1995. Einleitung: Aufgabenstellung, Ziele, Vorgehen, Definition des Glockerbechers, Kategorien der Zuordung, Regionale Gliederung. In: Strahm C. (ed.), *Das Glockenbecher-Phänomen. Ein Seminar.* Freiburger Archäologische Studien 2, 7–14. Freiburg i.Br.

Stuiver M. / Reimer P. J. / Bard E. / Beck J. W. / Burr G. S. / Hughen K. A. / Kromer B. / Mc Cormac F.G. / Van Der Plicht / Spurk M. 1998. INTCAL98 Radiocarbon age calibration 24,000 – 0 cal BP. *Radiocarbon* 40, 1041–1083.

Tunia K. 1979. Cmentarzysko kultury ceramiki sznurowej w Koniuszy, woj. Kraków. *Sprawozdania Archeologiczne* 31, 47–75.

Wiechmann A. 1995. Böhmische Gruppe: Kleinpolen. In: Strahm C. (Hrsg.), *Das Glockenbecher-Phänomen. Ein Seminar*. Freiburger Archäologische Studien 2, 66–73. Freiburg i.Br.

Winiger J. 1992. Beinerne Doppelspitzen aus dem Bielersee. Ihre Funktion und Geschichte. *Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte* 75, 65–99.

Włodarczak P. 1998. Groby kultury mierzanowickiej i kultury trzcinieckiej z Żernik Górnych. In: Kośko A. / Czebreszuk J. (eds.), *„Trzciniec": system kulturowy czy interkulturowy proces?*, 161–177. Poznań.

Włodarczak P. 2000. Kultura ceramiki sznurowej na Wyżynie Małopolskiej. Manuscript of the Ph.D. dissertation, archives of the Institute of Archaeology and Ethnology of Polish Academy of Sciences. Kraków.

Włodarczak P. 2001. The absolute chronology of the Corded Ware culture in the south-eastern Poland. In: Czebreszuk J. / Müller J. (eds.), *The absolute chronology in central Europe during the 3^{rd} millenium BC*, 103–129. Poznań - Bamberg - Rahden/Westf.

Włodarczak P. / Kowalewska-Marszałek H. 1998. Datowanie bezwzględne zespołu kultury pucharów dzwonowatych z Sandomierza. *Sprawozdania Archeologiczne* 50, 55–82.

Wojciechowski W. 1987. The Bell Beaker Culture in Southern Poland. Origin and Evolution. In: Waldren W.H. / Kennard R.C. (eds.), *Bell Beakers of the Western Mediterranean. Definition, Interpretation, Theory and New Site Data. The Oxford International Conference 1986.* BAR International Series 331, 685–709. Oxford.

Wojdanowicz K. / Pyżuk M. 1989. Neolityczny szkielet ludzki z Sandomierza, woj. Tarnobrzeg. *Sprawozdania Archeologiczne* 40 (1988), 143–157.

Żurowski J. 1932. Pierwsze ślady kultury puharów dzwonowatych w Polsce. *Wiadomości Archeologiczne* 11, 117–168.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

ARCHAEOLOGY OF BEAKER SETTLEMENTS IN BOHEMIA AND MORAVIA. AN OUTLINE OF THE CURRENT STATE OF KNOWLEDGE.

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Jaroslav Peška (Olomouc, Czech Republic)

Introduction

In this paper we are going to present the current state of knowledge on the Bell Beaker settlements and settlement pattern in Bohemia and Moravia. We aim to re-examine these settlement finds in the context of new evidence from most recent large-scale excavations. Despite of growing number of settlement sites recorded in both regions, the overall picture of the late Eneolithic settlement areas and their structuring, however, remains „invisible“. We are still unable to reconstruct the common construction of dwellings. Recent large-scale excavations produced new evidence of simple post-structures, however none of them could be clearly interpreted as ground plan of houses. Perhaps the systematic study of daub wall-plasters may give an answer to the question of the form and construction of dwellings that may have consisted of shallow anchored posts or surface log constructions.

The Bell Beaker settlement pattern was examined in the context of other late Eneolithic Cultures in the recently published paper (TUREK / PEŠKA 2001). Therefore in this paper we will stick to the model discussed earlier, however considering some new critical views. The Beaker settlement pattern seems to represent a settlement network of small hamlets, presumably with a close spatial relationship to funerary areas. The small habitation unites might have been relatively often shifted within a limited area, possibly following watercourses as main communication routes. As Beaker cemeteries appear usually higher up on slope locations we may presume the relevant settlement sites might have been located lower down in the valley nearer to a watercourse. The demographic composition of some burial groups, especially of the late Bell Beaker period challenges some of previously created models.

A preliminary report on the results of some recent large-scale excavations in central Moravia is one of the crucial parts of this paper. Some finds recovered recently from the settlement at Olomouc-Slavonín and other sites in central Moravia may possibly represent the mixed pottery material of the local Corded Ware and the Beaker "Begleitkeramik" (accompanying pottery), which is combination yet unseen in the burial context. There seems to be technological resemblance of both of these types of pottery including the late Corded Ware burial assemblages (already with Beaker burial rites) from the same site.

Artefacts in burial contexts were usually carefully selected and their choice was set following the cultural norms and perhaps ideology. On the other hand the material culture from settlements seems to be less selective and it is more likely to witness the continual cultural change.

Bell Beaker Phenomenon

Bell Beakers are an enigmatic phenomenon that puzzled European archaeologists for more than 100 years. Bell Beaker Phenomenon, which spans the vast area from north-western Africa to the hearth of Carpathian Basin. The spread of both the Beaker decorative style and the prestige goods, the so-called "Beaker package", over most of the central and western part of the Europe including British Isles, has initiated manifold investigations. The different explanations of origin and routes over which the style spread are being examined and hypothetical maps of possible paths of the "Beaker expansion" were created. The areas of the Beaker origin were presumed to be central Europe as well as the Iberian Peninsula or the lower Rhine region. The problem of the origin of the Bell Beaker style has not yet been satisfactorily solved and compromise explanations such as was the "Rückstrom" theory (Sangmeister 1963) represent a lack of relevant data. Candidates for the earliest Beakers are the "Maritime style", which originated in the area of the mouth of the Tejo in Portugal, and the so-called All-Over-Corded (AOC) and All-Over-Ornamented Beakers (AOO), which seem to originate from late Corded Ware Protruding Foot Beakers (PFB) in the lower Rhine region. There are no suggestions of any local development towards the shape and decorative style of Bell Beakers anywhere else in Europe apart from the area of the lower Rhine (Lanting / Van der Waals 1976).

An essential problem seems to be the explanation of the meaning of the Beaker Phenomenon. Why does the "Beaker European Union" emerge, and what caused its spread over the continent? The traditional image of the Beaker people as nomads or semi-nomads has generally been rejected by modern studies on Beaker economy and settlement pattern (e.g. Turek / Peška 2001). It is less likely that the Bell Beaker decorative style and the "Beaker package" spread due to the mobility of their bearers than thanks their symbolic meaning as prestige objects linked perhaps to some kind of ideology. It seems more appropriate to speak about spreading style and technology rather than migration of people or objects. Some recent petrographical studies on French Bell Beaker pottery suggest that it is usually of local, domestic production (Salanova 2000, with further references). The specific technological character of decorated Bell Beakers also induced discussions of the possibility of the long-distance exchange of them as prestige artefacts. Some similar studies from central Europe, however, suggest that the uniformity of the Bell Beaker pottery can be ascribed to the existence of common cultural traditions among widely distributed groups rather than to exchange (Rehman / Robinson / Shennan 1992). Scientific analysis of central European decorated Beakers and so-called Begleitkeramik (accompanying pottery) has produced evidence of the local production of both types of pottery with possible short-distance exchange.

We should bare in mind that the "historical reality" of the Bell Beaker background was different in different regions and that the understanding of the Beaker Phenomenon will be possible only in the sequence of the late Eneolithic development.

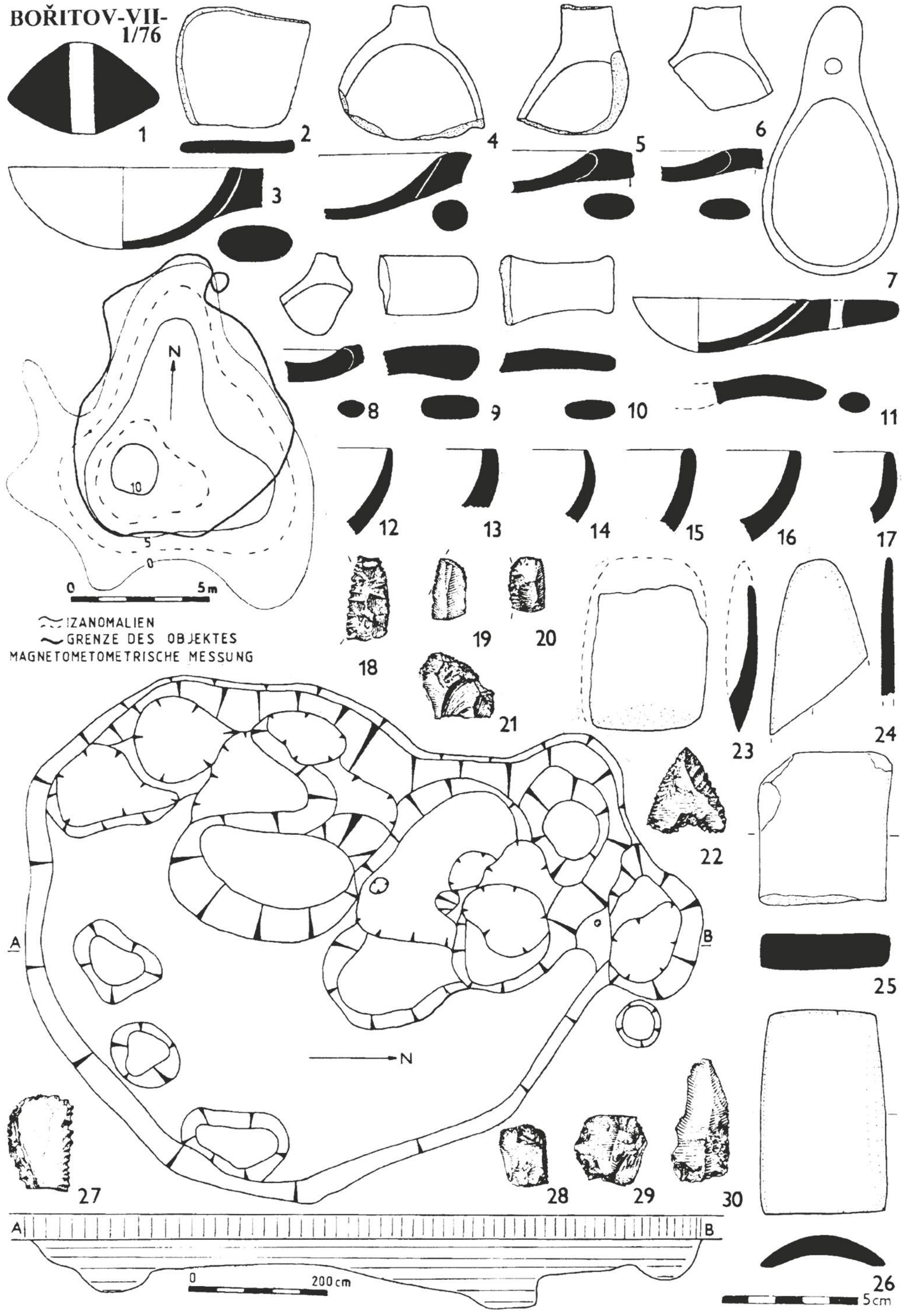
Beaker settlement sites, quantity, distribution and character of evidence

Moravia is not only the region with largest number of Bell Beaker burial finds in Europe, but also with probably the richest collection of settlement finds. Settlements represent more than 35% of the total amount of sites in Moravia. The list of Moravian settlements includes 225 sites from 145 parishes. There are 68 sites listed with evidence of sunken features, 18 sites with evidence of occupation layer, 29 sites recorded by field-walking. Many other settlement sites may be reconstructed according to isolated finds and intrusions of Beaker pottery in sunken features of other periods that may be residues of destroyed settlements.

The number of Beaker settlement sites in Bohemia also increased in the last decades due to recent large-scale excavations and systematic field-walking campaigns (Turek 1996; 1998, Turek / Peška 2001). After a detailed revision of the archaeological data in north-west Bohemia the number of Bell Beaker settlements raised up to 14% of the total amount of contemporary sites. In whole Bohemia the amount of settlement sites raised up to 10 % from only 4% listed by L. Hájek (Hájek 1968).

The average number of sunken features usually excavated within one site is 1 to 3. They are usually small and shallow circular pits with flat bottom or extensive amorphous complex pits (traditionally interpreted as clay-pits). Large-scale excavations, such as Olomouc-Slavonín (up to 14 hectares excavated in 1995-2001, see below) show a pattern of small clusters of sunken features located within 200 meters apart from each other. The recent experience of survey by surface collection (field-walking) is suggesting that the probability of indicating the Bell Beaker settlement sites in a arable landscape is much higher if one follows the surface scatters of artefacts. There seems to be more Beaker pottery and other artefacts distributed in the ploughzone or residues of an occupation layer than in sunken settlement features if they are excavated (new evidence of the Beaker settlements in Bohemia, for example Turek / Daněček 1997; 2000; etc.).

An important contribution to the better understanding of Beaker settlements will be the forthcoming publication of a catalogue of the Bell Beaker settlement finds in Moravia (Dvořák / Ondráček, manuscript completed in 1992). The list of Moravian settlements includes 225 sites from 145 parishes. There are 68 sites listed with evidence of sunken features, 18 sites with evidence of occupation layer, 29 sites recorded by field-walking and many other settlement sites may be reconstructed according to isolated finds and intrusions of Beaker pottery in sunken features of other periods that may be residues of destroyed settlements.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Taf. 6

Fig. 1. Bořitov VII, district Blansko, feature 1/76 (after Dvořák / Ondráček 1992, Taf. 6).

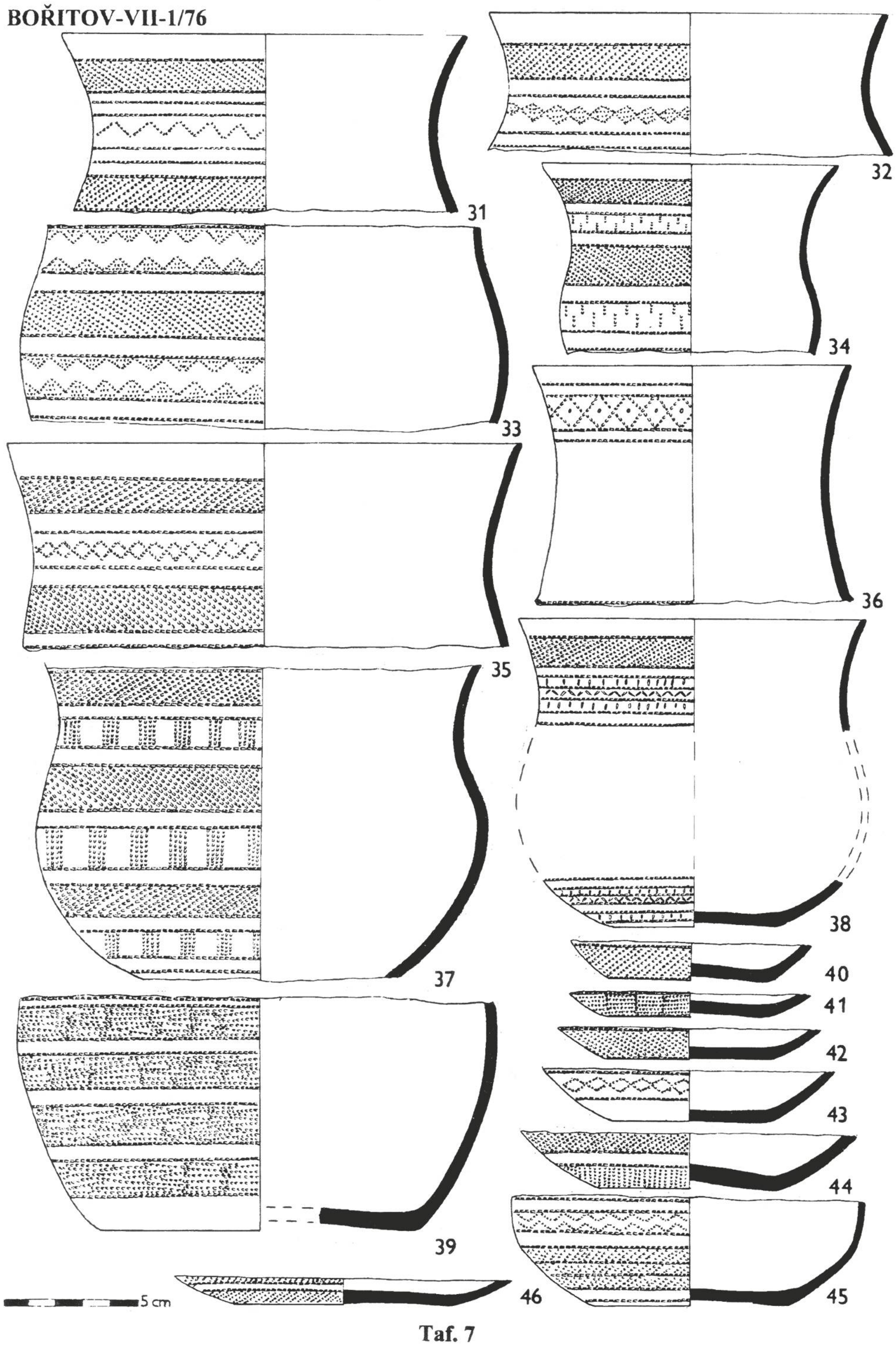
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Fig. 2. Bořitov VII, district Blansko, feature 1/76 (after Dvořák / Ondráček 1992, Taf. 7).

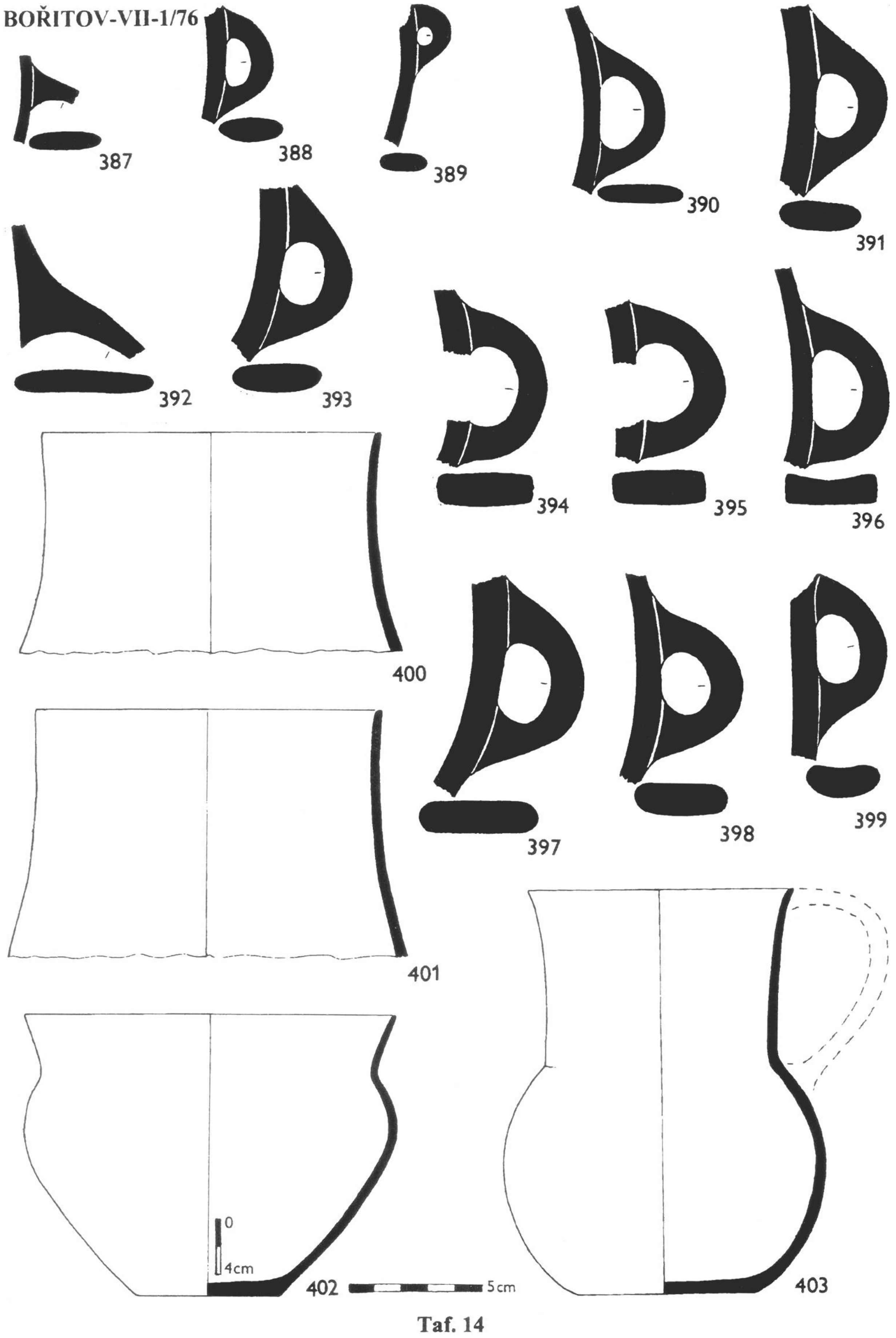
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Fig. 3. Bořitov VII, district Blansko, feature 1/76 (after Dvořák / Ondráček 1992, Taf. 14).

Some chronological considerations.

It is rather difficult to synchronise the Bell Beaker chronology based on funerary pottery assemblages (Dvořák 1993, with further references) with the chronology of the domestic pottery production from settlement context. The four groups of pottery that Dvořák distinguished within the burial assemblages do not seem to be equally represented on settlements. The "Maritime" elements of the group I decorated beakers were never recorded in the settlement context. The only settlement finds that may represent the I/II group, but rather the II group appeared in Bořitov (District Blansko, see Fig. 1-3). The earlier Bell Beaker finds come also from Kelčice (District Prostějov, Dvořák / Ondráček 1992, Taf. 54, 55). This may be suggesting that the "earliest - maritime" group of Bell Beakers may in fact represent a prestigious ware appearing only in certain graves rather then specific chronological entity.

The later group III is represented by more abundant settlement fins such as Rajhrad (District Brno-venkov, Dvořák / Ondráček 1992, Taf. 40) and Holubice (District Vyškov, Dvořák / Ondráček 1992, Taf. 72). Perhaps the most significant collection of settlement finds representing the find group III comes from the site at Brno-Obřany (see Fig. 4-6) or site at Střelice (District Znojmo, see Fig. 7) with late engraved decoration. For the group III are characteristic pots with plastic cordons and absence of decorated beakers.

Bell Beaker settlements in some neighbouring regions

The settlement finds are rare in the neighbouring regions and a little is published. For example in the adjacent part of Saxonia, only 7 sites are known from the districts of Dresden and Meissen, two of them are isolated finds and 5 are burial sites (Turek 1998, 110 with further references). Better situation is in Bavaria. There are 15 sites with evidence of about 30 sunken features and another 15 sites are represented by non-burial single finds. The concentration of settlement finds appears mainly in the region of lower Isar River and the Goldboden area. In the north-east Bavaria and middle south Franconia it is the region of Altmühl (personal communication Volker Heyd).

Reconstruction of habitation sites and the question of dwellings

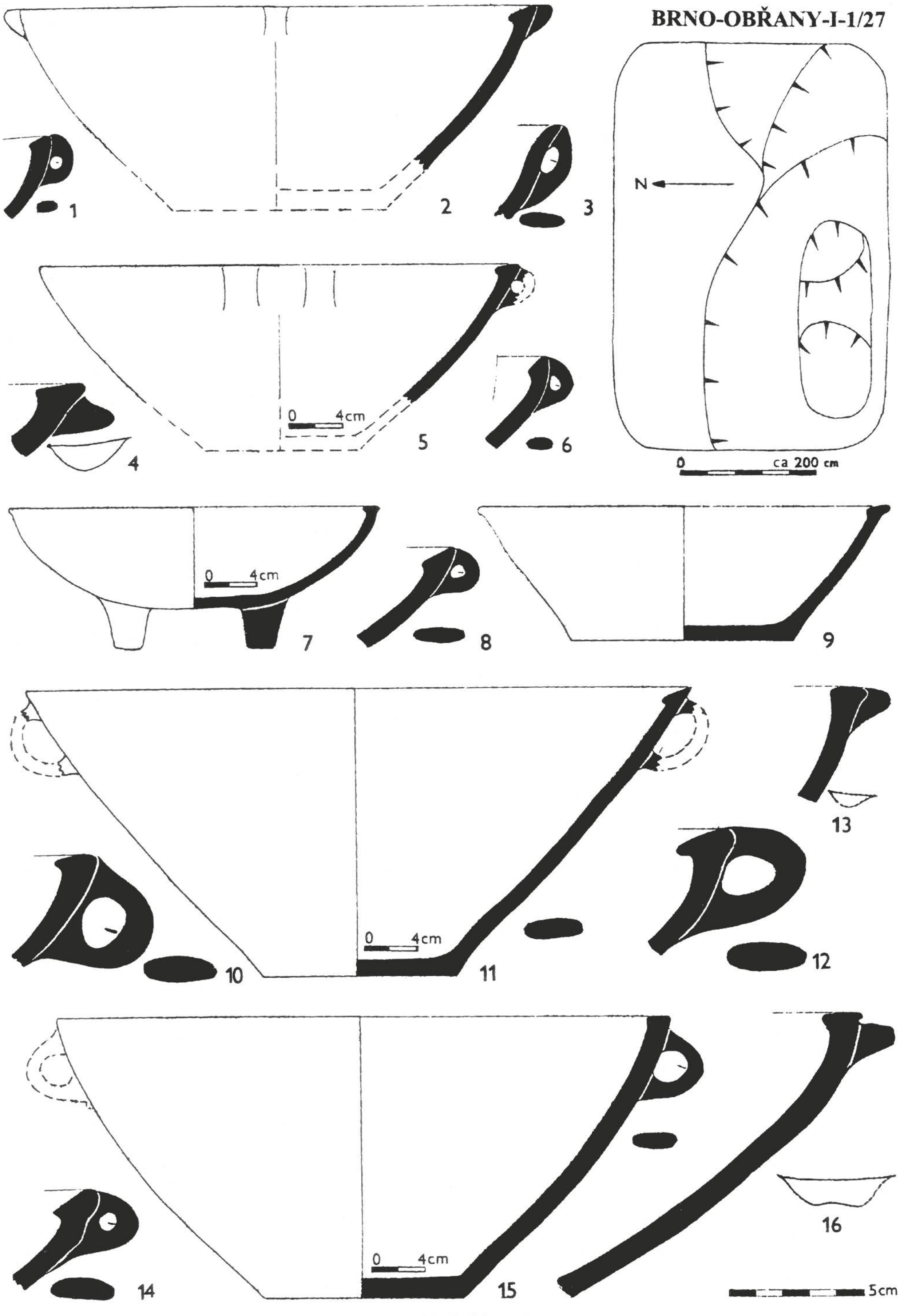
The semi-sunken rectangular features that used to be interpreted as huts probably represent a different kind of settlement feature (cf. Turek / Peška 2001, with further references). We are still unable to reconstruct the common construction of Beaker dwellings. The question mark remains over the chronological position of post structures from Kozly near Mělník in central Bohemia (Zápotocký 1960). The evidence of posthole alignments suggest there were probably long houses, however, they may be of later Proto-Únětice date.

Recent large-scale excavations produced new evidence of simple post-structures (Olomouc - Slavonín, Peška 1998, or Čáslav-Na skále, Pavlů 2000) however none of them could be clearly interpreted as ground plan of a house. The 2001 excavation campaign at Olomouc-Slavonín produced also an irregular trapezoid ground plan of postholes, presumably of a house of the Globular Amphora Culture. This was the first evidence of post structure of this period. Perhaps the contemporary large-scale excavations covering vast areas of the traditional farming regions may produce more evidence of this highly invisible human activity. Perhaps the systematic study of daub wall-plasters may give an answer to the question of the form and construction of dwellings, which might have consisted of shallow anchored posts or surface log constructions. The analysis of the Medieval daub construction relics (Vařeka 1995) produces new evidence for re-creation of many construction details including the estimation of the size of a building or questions on presence of ceiling or number of floors. The methodology created on more abundant and distinctive Medieval daub, however, produced important results, when applied on prehistoric site (Vařeka 1997, 337, 340, Fig. 6).

It seems that the habitation areas usually consisted of one or two dwellings, which were of shallow or ground construction and were surrounded by a limited number of small circular or semicircular pits of certain utility character. The interpretation of the larger multiple "accumulative" pits is not clear. They were usually interpreted as "exploitation" pits for extraction of clay that might have been needed for plastering of walls and/or pottery production. There are of course other possibilities of interpretation, these amorphous pits might have served as cesspools or other domestic purposes.

Environment of the Beaker settlements

The environmental data from Beaker settlement sites were only randomly collected and therefore their synthesis and interpretation is complicated. For this rea-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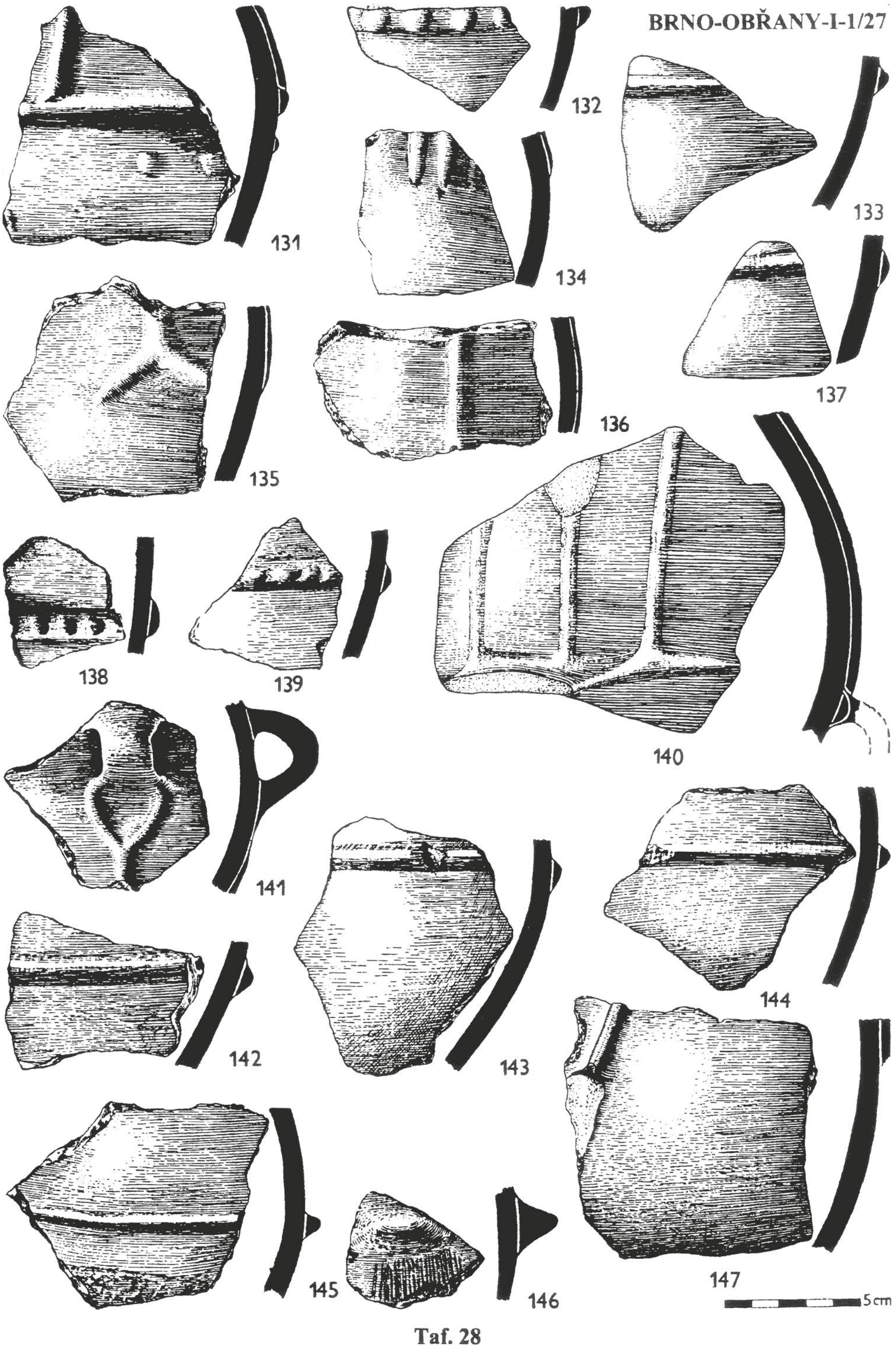
16
5cm
Taf. 22

Fig. 4. Brno- Obřany I, feature 1/27 (after Dvořák / Ondráček 1992, Taf. 22).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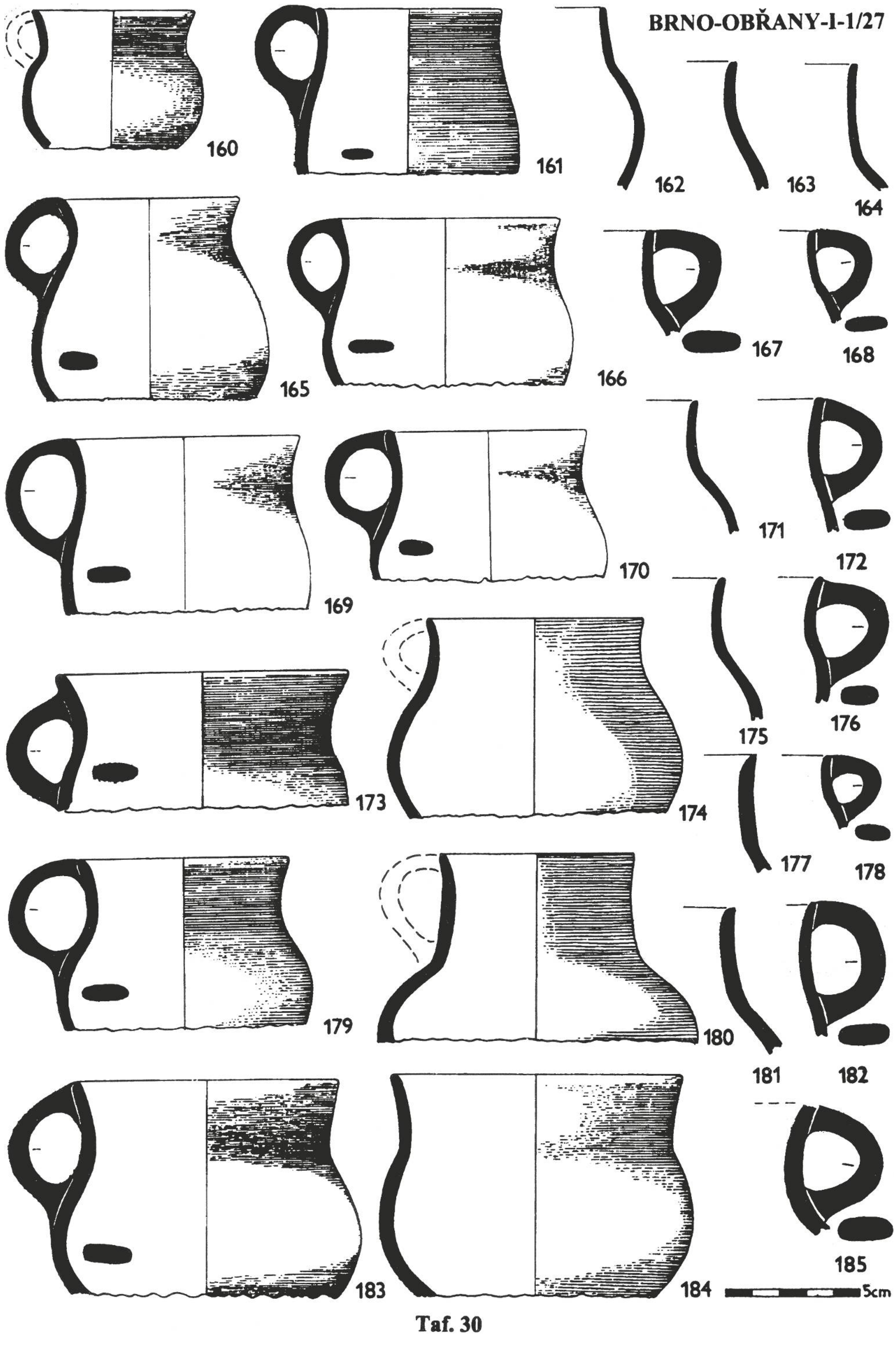
5cm
Taf. 28

Fig. 5. Brno- Obřany I, feature 1/27 (after Dvořák / Ondráček 1992, Taf. 28).


BRNO-OBŘANY-I-1/27
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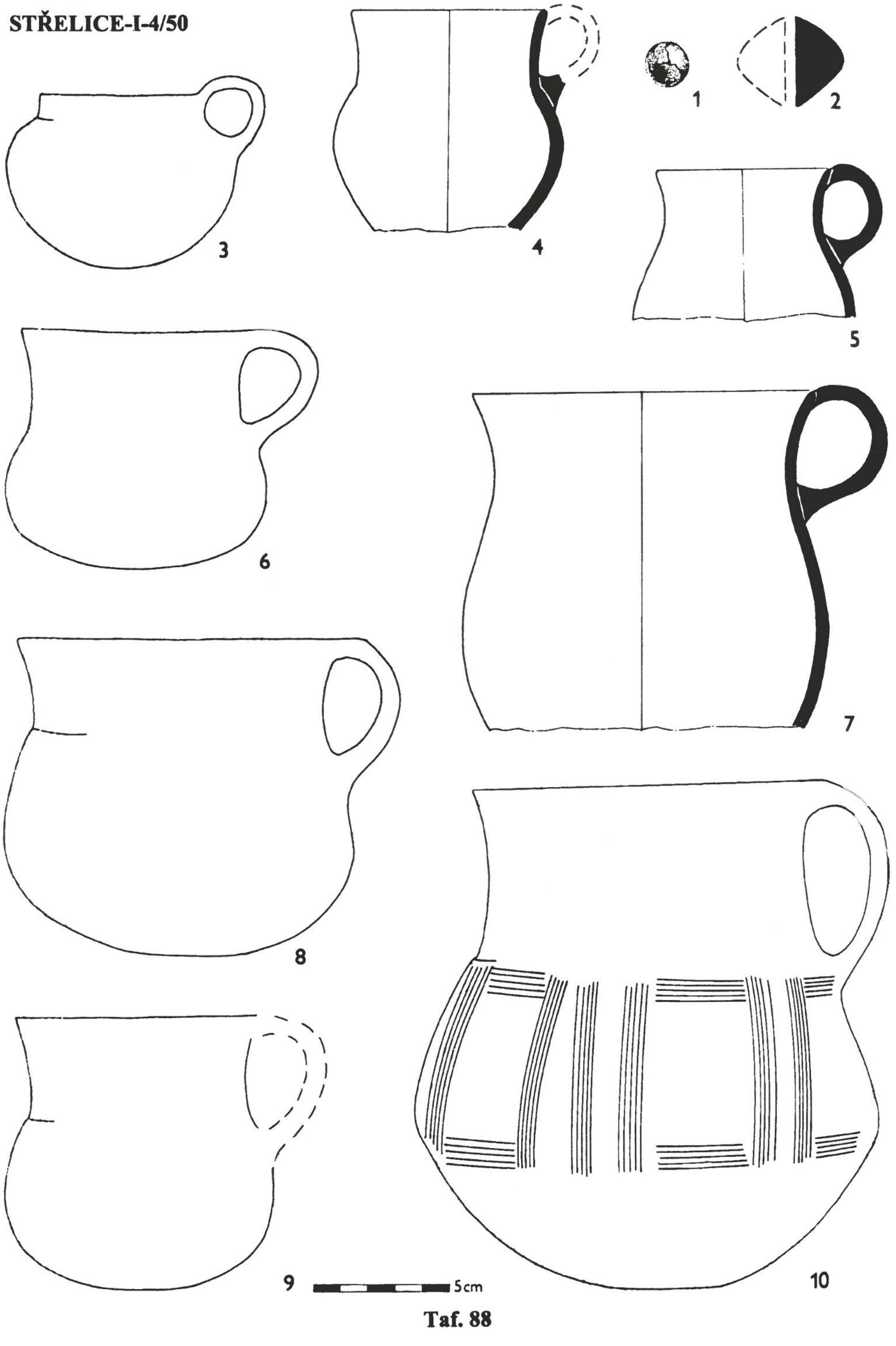
5cm
Taf. 30

Fig. 6. Brno - Obřany I, feature 1/27 (after Dvořák / Ondráček 1992, Taf. 30).


STŘELICE-I-4/50
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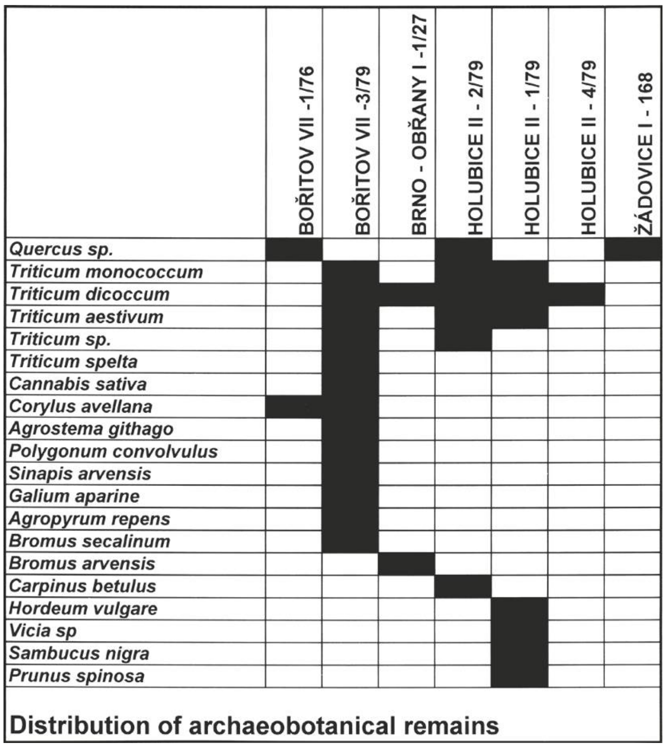
2
3
4
5
6
7
8
9
5cm
10
Taf. 88

Fig. 7. Střelice I (District Znojmo), feature 4/50 (after Dvořák / Ondráček 1992, Taf. 88).

son we cannot offer any quantitative review of environmental data.

Vegetation and plant remains (Fig. 8)

Table 1 summarizes the appearance of different types of archaeobotanical remains from seven settlement sites in southern Moravia. The first results of the archaeobotanical analysis suggest that the composition of weeds and cultural plants (cereals) may be evidence of more complex Eneolithic arable system of agriculture (Tempír personal communication).



Distribution of archaeobotanical remains

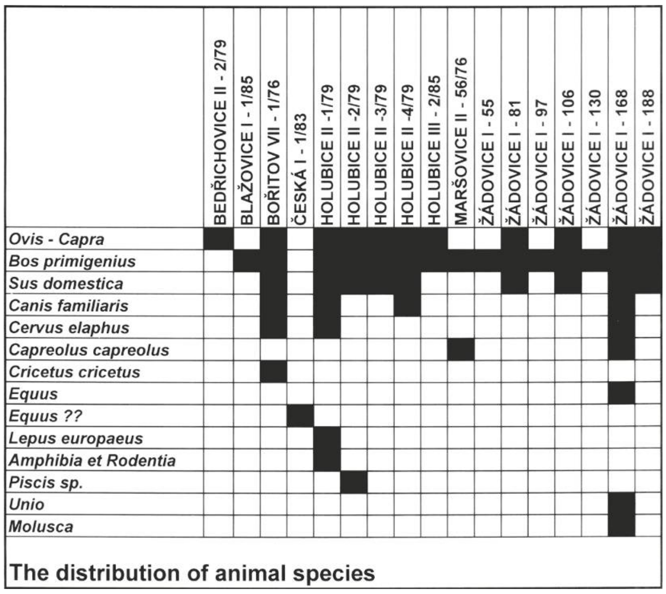
	BOŘITOV VII -1/76	BOŘITOV VII -3/79	BRNO - OBŘANY I -1/27	HOLUBICE II - 2/79	HOLUBICE II - 1/79	HOLUBICE II - 4/79	ŽÁDOVICE I - 168
Quercus sp.	●			●			●
Triticum monococcum		●		●	●		
Triticum dicoccum		●	●	●	●	●	
Triticum aestivum		●		●	●		
Triticum sp.		●		●			
Triticum spelta		●					
Cannabis sativa		●					
Corylus avellana	●	●					
Agrostema githago		●					
Polygonum convolvulus		●					
Sinapis arvensis		●					
Galium aparine		●					
Agropyrum repens		●					
Bromus secalinum		●					
Bromus arvensis			●				
Carpinus betulus				●			
Hordeum vulgare					●		
Vicia sp					●		
Sambucus nigra					●		
Prunus spinosa					●		

Fig. 8. Distribution of archaeobotanical remains on Bell Beaker settlements in south Moravia.

Archaeozoological analysis (Figs. 9-10)

Table 2 summarizes the distribution of animal species recorded in 17 settlement contexts from 7 sites in southern Moravia. Cattle is leading amongst the domesticated species followed by sheep/goat and pig. The domesticated dog appeared in four contexts. There is general lack of wild species in the Bell Beaker contexts. The deer (Cervus elaphus) is the most common wild animal represented in 3 contexts on 3 sites (account according to bones, not only antlers). Remaining species were always recorded in a single case on one site only.

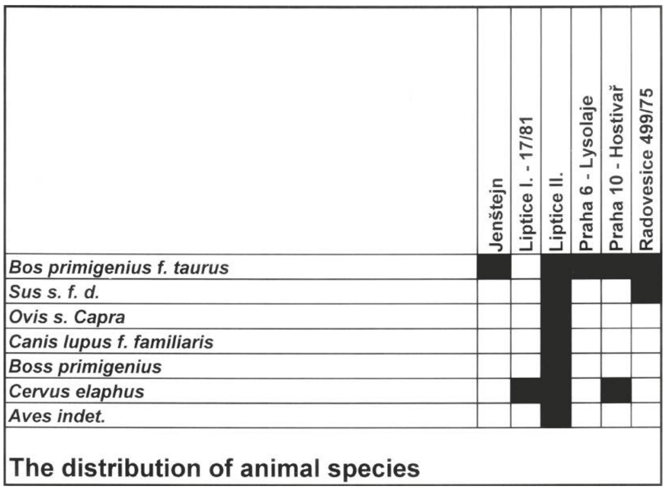
The current state of analysed archaeozoological data related to the Beaker period in Bohemia is even poorer. The general account is given in paper by J. Turek (Turek 1996, 16-17). In the following table 3 we summarise only those finds related to the settlement context. There are finds from 5 single contexts from 5 individual sites and a larger collection from several features at Liptice II (District Teplice, North Bohemia). The analysis was carried out by M. Beech (1993, in Turek 1993) and results published by J. Turek (Turek 1998, 110; and Turek / Peška 2001, 420-421).



The distribution of animal species

	BEDŘICHOVICE II - 2/79	BLAŽOVICE I - 1/85	BOŘITOV VII - 1/76	ČESKÁ I - 1/83	HOLUBICE II -1/79	HOLUBICE II -2/79	HOLUBICE II -3/79	HOLUBICE II -4/79	HOLUBICE III - 2/85	MARŠOVICE II - 56/76	ŽÁDOVICE I - 55	ŽÁDOVICE I - 81	ŽÁDOVICE I - 97	ŽÁDOVICE I - 106	ŽÁDOVICE I - 130	ŽÁDOVICE I - 168	ŽÁDOVICE I - 188
Ovis - Capra	●		●		●	●	●	●	●			●		●		●	●
Bos primigenius		●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
Sus domestica			●		●	●	●	●				●		●		●	●
Canis familiaris			●		●			●								●	
Cervus elaphus			●		●											●	
Capreolus capreolus										●						●	
Cricetus cricetus			●														
Equus																●	
Equus ??				●													
Lepus europaeus					●												
Amphibia et Rodentia					●												
Piscis sp.						●											
Unio																●	
Molusca																●	

Fig. 9. Distribution of animal species on Bell Beaker settlements in south Moravia.



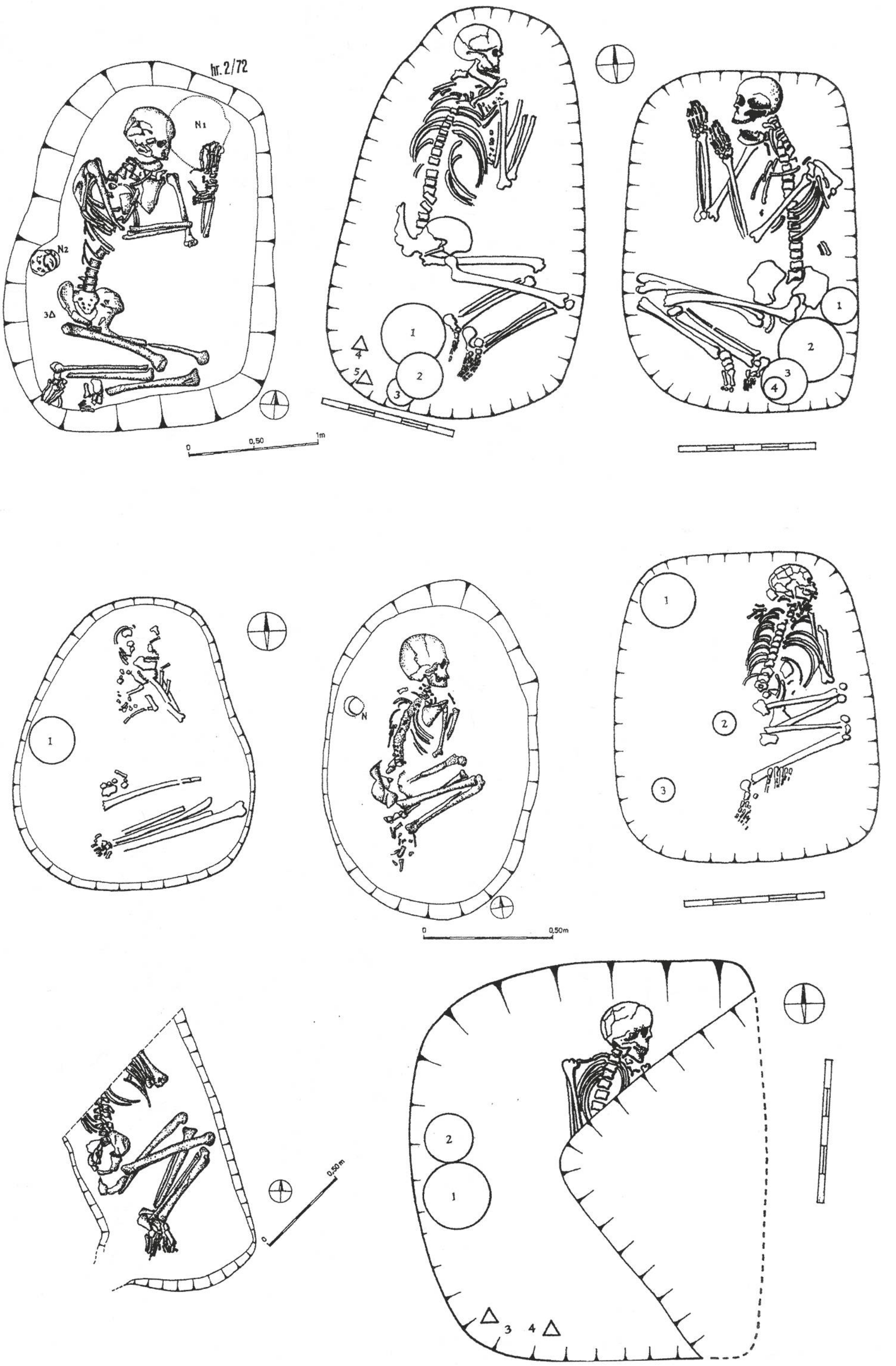
The distribution of animal species

	Jenštejn	Liptice I. - 17/81	Liptice II.	Praha 6 - Lysolaje	Praha 10 - Hostivař	Radovesice 499/75
Bos primigenius f. taurus	●		●	●	●	●
Sus s. f. d.			●			●
Ovis s. Capra			●			
Canis lupus f. familiaris			●			
Boss primigenius			●			
Cervus elaphus		●	●		●	
Aves indet.			●			

Fig. 10. Distribution of animal species on Bell Beaker settlements in Bohemia.

Settlement pattern

The settlement pattern of Bell Beaker period seems to represent a network of small residential areas with close spatial relationships to funerary areas. The size and distribution of cemeteries suggests a model of small farmsteads maintaining few families or perhaps one extended family. These small habitation unites might have been relatively often shifted within a limited area,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4

Fig. 11. Kamýk - Velké Přílepy (District Praha - západ) The late Bell Beaker burial group of juvenile individuals (after SKRUŽNÝ / TUREK / VOJTĚCHOVSKÁ 2000).

possibly following watercourses as main communication routes. As Beaker cemeteries appear usually higher up on slope locations we may presume the relevant settlement sites might have been located lower down in the valley nearer to a watercourse. This settlement pattern is different to the pattern of earlier Neolithic nucleated settlement consisting of large accumulations of villages repeatedly occupied in the same location.

Sites of the Corded Ware and Bell Beaker periods show a high preference for areas suitable for an agricultural economy. Most of the sites are situated on loess substrata, or very close to them. It even appears that when selecting sites, a very limited area of loess was preferred above all others (Turek 1996; Turek / Peška 2001). In previous papers we discussed the model of a dense network of small cemeteries reflecting the settlement pattern of dispersed small residential unites. It is, however, necessary to emphasize that in the late Bell Beaker period some cemeteries do not quite represent the true demographic picture of a small community. A small burial group of nine inhumations excavated at Kamýk-Velké Přílepy (District Praha-západ) was probably part of a larger cemetery (Skružný / Turek / Vojtěchovská 2000). Particularly interesting is the age and gender composition of the buried individuals. Seven out of eight bodies were placed on their left side, with their head orientated to the north, which is typical for male burials within the Bell Beaker period (see Fig. 11). In the Bohemian group of Bell Beakers there appear to be up to 50% more male burials in our archaeological record. This disproportional ratio of male/female burials has been observed on several other Bell Beaker cemeteries in Bohemia. Another specific aspect of the Kamýk cemetery is the age distribution of buried individuals. All of them are sub-adult or juvenile (10-22 years of age). A similar group of young individuals has been observed on the Beaker cemetery at Mochov (District Praha-východ), which is yet the largest Bell Beaker cemetery excavated in Bohemia (28 burials, Moucha 1966, 107; Hájek 1968, 71-72). If this pattern of age and gender ranking within small burial groups would appear to be more regular it may challenge our original assumption that the size and demographic composition of BB cemeteries reflect size of the respective settlements (Turek 1996; Turek / Peška 2001).

Material Culture of Beaker Settlements

The settlement finds appear to be of crucial importance for certain chronological considerations. Some finds recovered recently from the settlement at Olomouc-Slavonín in central Moravia may possibly represent the mixed pottery material of the local Corded Ware and Beaker "Begleitkeramik", which is combination unseen in burial context. There seems to be technological resemblance of both of these types of pottery including the late Corded Ware burial assemblages from the same site. If this assumption is right then we will have to reconsider the earlier chronological frameworks. The most abundant type of settlement find is the domestic pottery. The types of pottery from settlements are roughly matching the composition of pottery assemblages known from cemeteries, including decorated beakers. There are however differences in size and frequency of particular types of vessels appearing in both environs. The large storage jars and amphorae rarely appear in burial contexts (except some cremation burials).

Stone axes

In the Bell Beaker Period stone axes seems to disappear entirely from the material culture. It seems highly unlikely that the functional importance of axes diminished in this period. They only disappeared from the most visible Bell Beaker archaeological context – burial rites. In this period stone axes were excluded from the symbolism of burial rites. They appear rarely in graves, such as at Čachovice (District Chomutov, grave 27B, see Neustupný / Smrž 1989, see here Fig. 12), Kolín (flint axes in graves XII and XIV, Hájek 1968, 40) or Brandýsek (Kytlicová 1960, 443, Fig. 6:1).

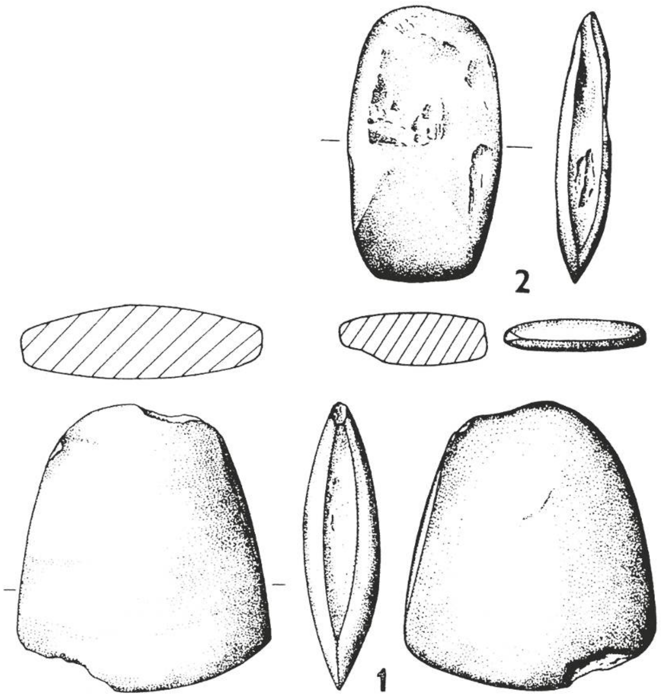
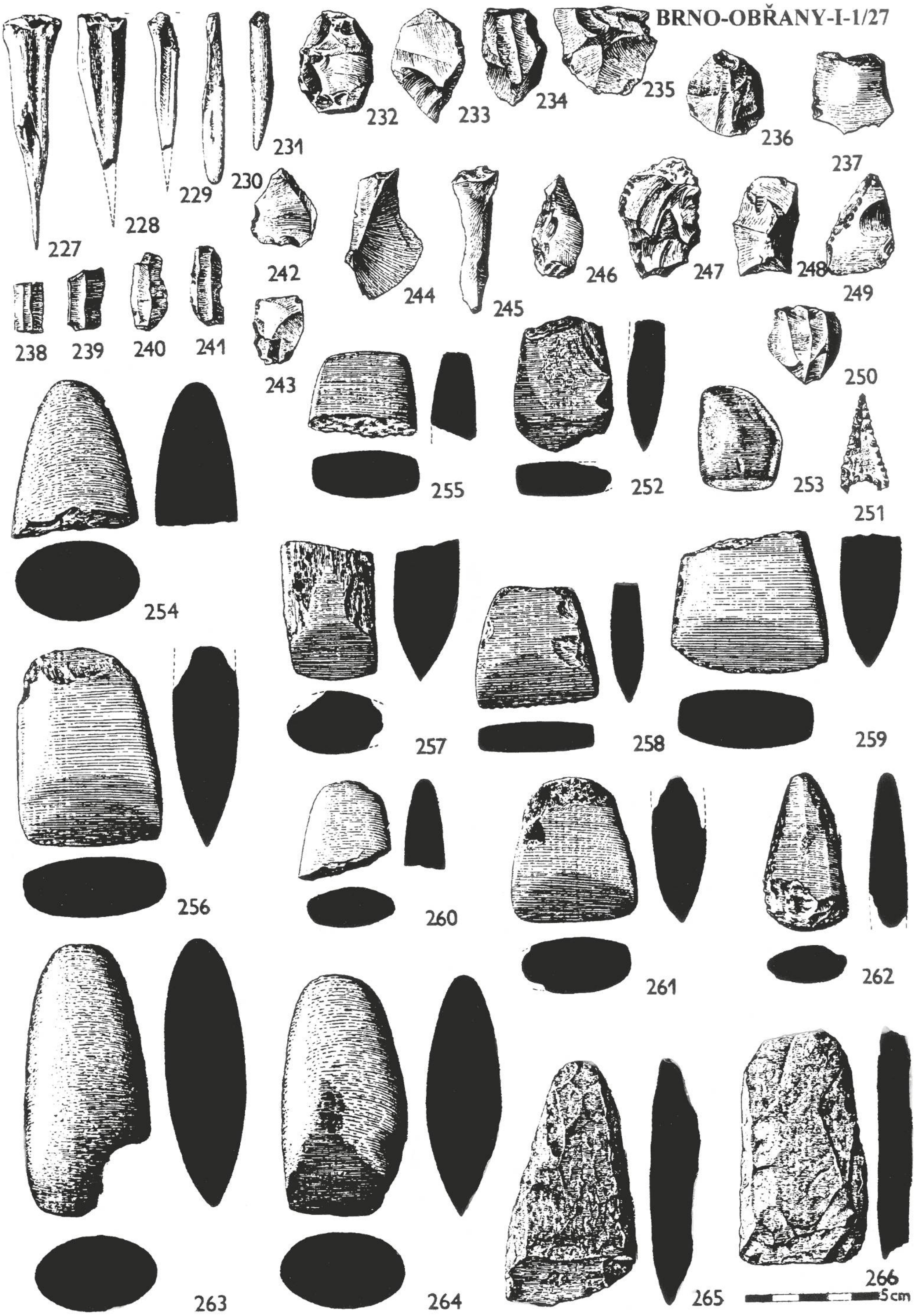


Fig. 12. Čachovice (District Chomutov) Bell Beaker axes from grave 27B (after Neustupný / Smrž 1989.


BRNO-OBŘANY-I-1/27
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259
260
261
262
263
264
265
266
5 cm

Taf. 33

Fig. 13. Brno - Obřany I, feature 1/27 (after Dvořák / Ondráček 1992, Taf. 33).

The symbolic role of stone axes and battle-axes, so important for the Corded Ware burial rites was in the Bell Beaker period replaced by new symbolic phenomenon, that is mainly represented by copper daggers and "archery package".

Due to the lack of evidence for the Beaker settlements there is a limited number of Beaker stone axes available for detailed analysis. There is only a limited amount of axes found in secure settlement contexts, usually dated by distinctive types of pottery. For this reason it is difficult to establish almost any typological framework. However the revision of some old museum collections produces identification of typologically more distinctive axes that may be connected with the Bell Beaker Period. These axes do not come from any secure, stratified context, they are mainly isolated finds, however, their morphology seems to correspond with the most common type of the Beaker axes known from some other sites in Bohemia and Moravia

Typology and raw materials of Beaker axes

The number of axes that could possibly be connected to the Bell Beaker period in Bohemia and Moravia is very limited therefore it is very difficult to establish any typological framework. The only distinctive type of axe is the short axe with a wide cutting edge and a lentil-like cross-section (see Fig. 12 and 13 for axes from Brno-Obřany). This is the only specific Beaker axe. The rest of the axes are of various non-distinctive shapes, some of them resembling the axes of the preceding Corded Ware period.

Given such a small amount of specimens it is difficult to find any significant preference in the use of raw materials. The choice of materials remains relatively heterogeneous as it was in the Corded Ware period. Among the largest collection of Beaker axes found at Prague – Šárka hill-fort the green crystalline tuff from Vrané nad Vltavou, is the prevalent raw material. Axes made of the crystalline tuff were very popular during the middle Eneolithic Řivnáč Culture in Bohemia and almost neglected in the Corded Ware period (Turek 2001).

New evidence of Beaker settlements.

Recent surface survey in Bohemia produced an unexpectedly abundant evidence of Bell Beaker settlements. In the central Bohemian lowland, the traditional settled area, the Beaker finds appear almost in every parish that has been sampled by the synthetic fieldwalking campaigns.

The surface scatters of artefacts may also be evidence of damaged parts of cemeteries, but in many cases is the non-funeral character of finds very probable.

Excavations of limited areas are usually producing evidence of isolated features (Čáslav, Pavlů 2000, 195-199, in Moravia recently Bohuslávky, Trnávka). The most significant results for the reconstruction of Beaker settlements and material culture are the recent large scale excavations in central Moravia.

Three late Eneolithic settlement areas were recently discovered in the vicinity of Olomouc. These sites offer an exceptional settlement sequence of the Eneolithic cultures that are usually poor for the settlement evidence (Globular Amphorae, Local Moravian Corded Ware and the Bell Beaker Culture). All we can currently offer is a preliminary report on the archaeological material that is just being processed in the laboratories of the Archaeological Centre in Olomouc. The impact of this new evidence seems to be, however, of a crucial importance for the reconstruction of the late Eneolithic settlement pattern, examination of the cultural continuity and perhaps for creation of new models explaining the origin of Bell Beaker "*Begleit*" pottery in Moravia.

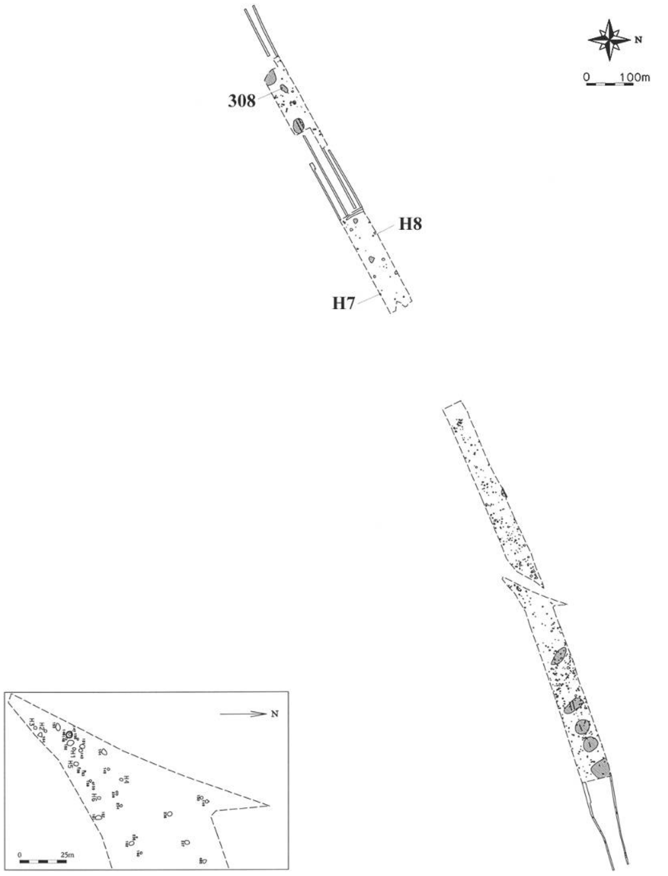

Fig. 14. Velký Týnec–Prostřední a Zadní hony, excavation 1998-1999. The plan of excavated area. The detail shows the Local Corded Ware cemetery. Late Eneolithic features numbered only.

Excavations at Velký Týnec

During a motorway construction in 1998-99 a rescue excavation at Prostřední hony and Zadní hony uncovered (Fig. 14) 7.6 hectares with 575 sunken features of different prehistoric periods (mainly TRB) and 8 graves of the local Moravian Corded Ware. The site is located on the left bank of the Morava River, about 6 km south-west of Olomouc. The site is based on a loess trace flowed closely around on both sides by the local watercourses, 236-244 m above sea level. Majority of features were unfortunately without any diagnostic finds. There were two burial groups of the local Moravian Corded Ware 700-800 m apart and in between them two probably contemporary settlement features with almost identical pottery ("*Begleit A*", see below). This would be one of the first records of the late Corded Ware settlement in Moravia and perhaps the absence of finds in many other features could be a key to the invisibility of settlements of this period (Fig. 15). The settlement feature (No. 308) with the classical Bell Beaker material was found in a different location, circa 1.7 km south-west of the Corded Ware site. It is represented by common Beaker pottery, which is, however technologically similar to Moravian Corded Ware finds (Fig. 16). There appear large storage vessels with plastic moulded decoration, as well as typical shapes of bell beakers resembles by their technological standards, such as, lower degree of firing, sand and mica mixture, seems similar to the Local Corded Ware material *(Begleit A).*

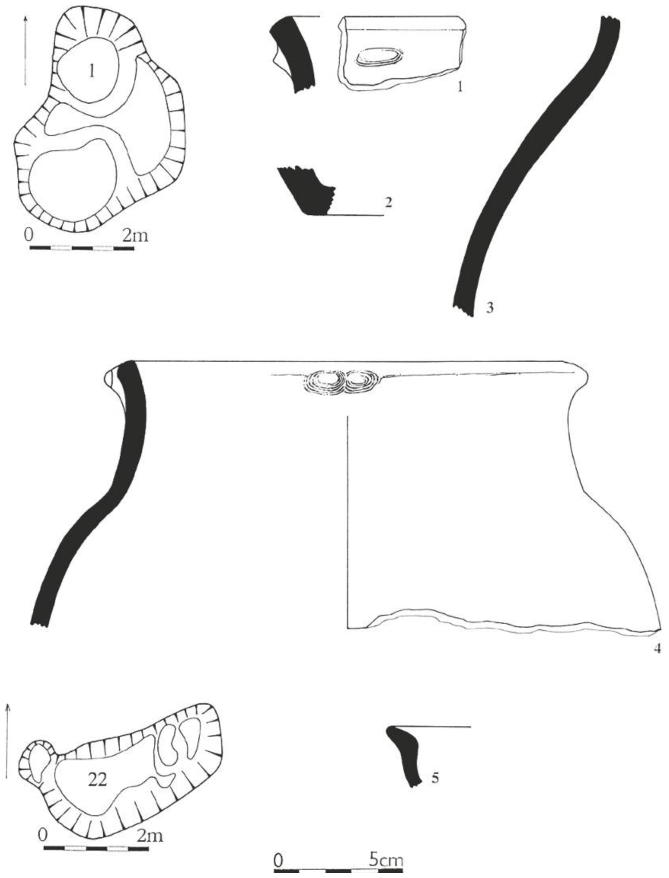

Fig. 15. Velký Týnec–Prostřední a Zadní hony, 1998-1999. Finds from the feature 1 and 22.

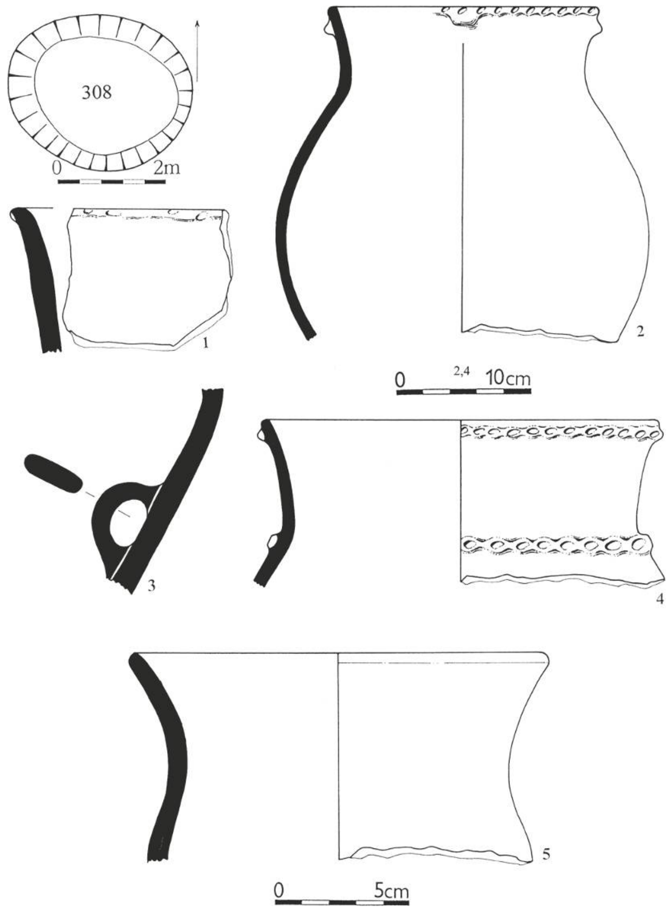

Fig. 16. Velký Týnec–Prostřední a Zadní hony, 1998-1999. Finds from the feature 308.

Excavations at Olomouc – Nemilany

In 1999 during motorway construction at Na kopci and Kapitulní a small burial ground of the Moravian Corded Ware and a Bell Beaker settlement were excavated in an immediate neighbourhood, within the area of 7.25 hectares. The site is located on a loess plateau, elevated about 50 m above the riverbed of the Morava River, on an eastern slope, 230-255 m above sea level. The nearest watercourse is, however, at the present day more than 500 m far from the site. There were 6 graves of the Moravian Corded Ware excavated in the immediate vicinity of the Bell Beaker settlement features (Fig. 17). Majority of settlement traces were found on the slope area. Fourteen Bell Beaker features were distributed over the area 600 m long (most of them within 200 m). In three cases there were two smaller pits next to each other, however,

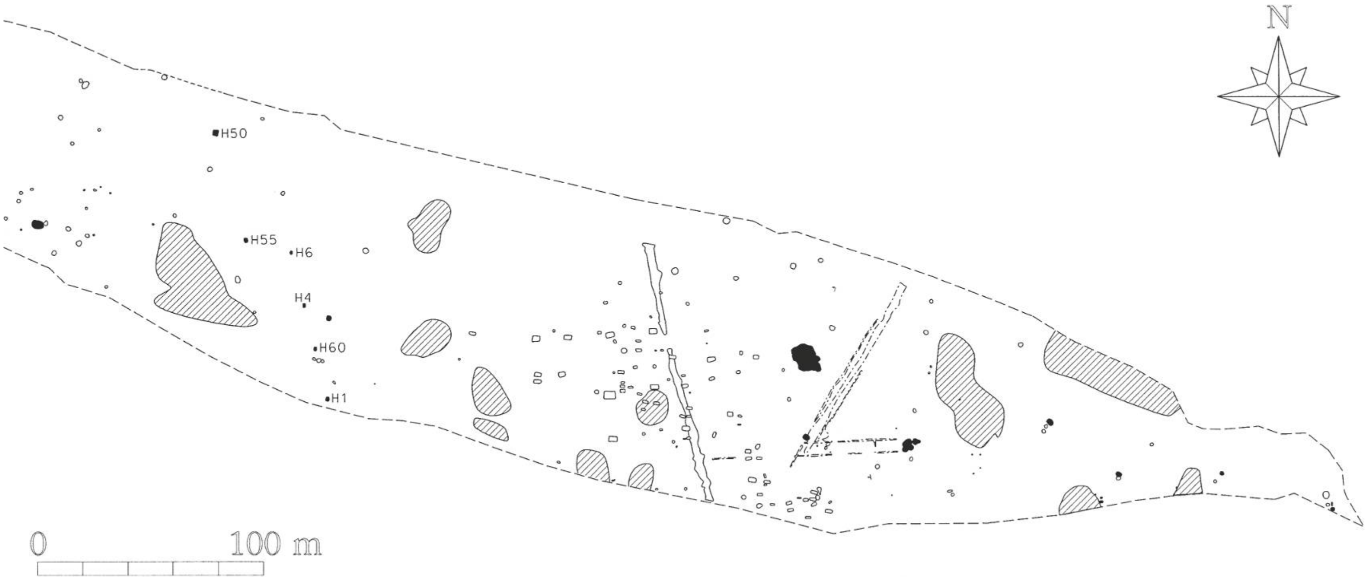

Fig. 17. Olomouc–Nemilany (1) – Na kopci and Kapitulní 1999. The plan of excavated area. The Bell Beaker settlement features are highlighted in black, the features with the symbol H represent the cemetery of Local Corded Ware.

there does not seem to be any sign of accumulation and the distance between individual features varies between 13 to 50 m, Apart from a large "exploitation" (?) pit (No. 28, 12.5 time 10.6 m) there were some smaller pits about 2 time 1.5 m and larger pits 5 time 3 m, usually of circular or oval groundplan. The largest pit No. 28 contained also some TRB pottery and it is similar by its size and shape to the pit in Žádovice (district Hodonín, Matějíčková 1999). The largest collection of pottery comes from a small circular pit No. 99 that contained mainly fragments of large amphorae and pots. A wide range of vessels is represented within the pottery from whole settlement, including spindlewhorls and polished, as well as chipped industry. Amongst the pottery finds there seems to be represented two types of Begleitkeramik (type A and B) with appearance of the decorated Bell Beakers.

Excavations at Olomouc – Slavonín

During the development of the new commercial zone at Horní lán, in the south-western suburb of the City of Olomouc, large scale excavations in 1995-97 (Peška 1998; 2000) and 2001 continuously covered vast area of 14 hectares. The sites were distributed on a wide gentle slope exposed from south-west to south-east. Extend of the settlement area is possible to predict according to the geophysical survey. The whole settled area covers almost 30 hectares and it is divided into two parts by a shallow valley of a small stream Nemilanka.

Within this area 3937 features of different periods were excavated, including graves. The multiperiod site produced an evidence of occupation since the later Neolithic Stroke pottery culture to the early Medieval period. For the topic o this paper is most important the continuous cultural sequence Globular Amphorae Culture – Moravian Corded Ware – Bell Beaker Culture – Únětice Culture (Fig. 18). Over 100 features were excavated of the three Eneolithic cultures, amongst which 35 features belong to the Globular Amhora Culture (Fig. 19), 25 features and 7 graves of the Moravian Corded Ware (including some fragments of the early "A-horizon" settlement pottery that was intruded into sunken features of other periods, Peška 2000, here see Fig. 19), and perhaps almost 50 features of the Bell Beaker Culture period (Fig. 18).

As Bell Beaker Culture were currently branded 36 partly processed features distributed over the area circa 500 time 250 m (over 12 hectares). It may be well possible that the Bell Beaker Culture settlement continued to the unexcavated areas in south and perhaps over the stream. The number of features puts Olomouc-Slavonín amongst the most extensive BB settlements ever excavated in Central Europe.

Small clusters of 2 or 3 pits were distributed over large area (distance 50 to 100 m). This pattern seems to fit with the model of small hamlets (Turek / Peška 2001), each of which perhaps consisted of a dwelling (ground construction?) and limited number of pits.

Types of features

The settlement site at Slavonín offered a similar types of sunken features as other known sites of the Bell Beaker period. Besides two large "exploitation" pits (1406, 2030), the majority of features were oval or circular pits and small "exploitation" (?) pits, consist-

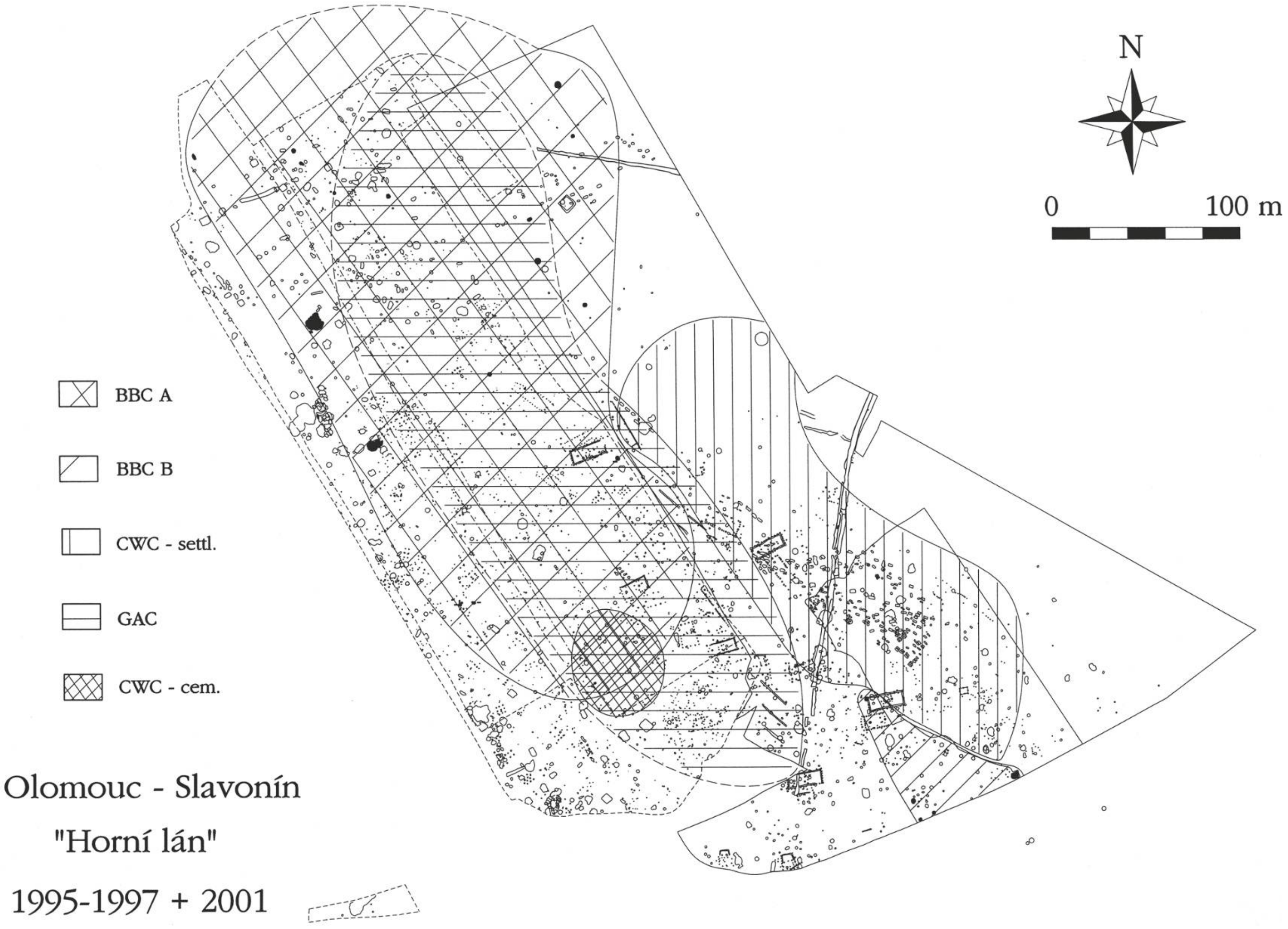

Fig. 18. Olomouc-Slavonín – Horní lán 1995-1997, 2001. The general plan of excavations with black highlighted features of the Bell Beaker group A and B, Globular Amphora features and settlement and cemetery of the local Moravian Corded Ware.

ing of several pits blending into each other on different levels. A post structure was near to the most extensive "exploitation" pit No. 2030. The postholes contained Beaker pottery, however, the groundplan does not indicate any clear structure therefore it is difficult to interpret it as dwelling, fence or other type of ground feature.

Finds

Amongst the Beaker material culture from Slavonín was recorded a clear evidence of a farming community. There were many grinding stones, sickle blades, corn imprints in pottery. The evidence of household production may be seen in clay spindlewhorls, bone awls and points. The results of archaeozoological analysis of osteological finds from seasons 1995-97 suggest the dominance of cattle, followed by sheep or goat and pig. The wild species are only rarely represented.

Pottery

A new phenomenon in the pottery production is a distinctive Moravian Corded Ware and Bell Beaker Culture interaction. Majority of pottery forms from Slavonín seems to have a connection to the Kosihy-Čaka/Makó and to the Somogyvár-Vinkovci cultures even though it is not identical.

The "*Begleitkeramik*" in Slavonín appears in 2 technological types:

Group A: Coarse pottery made of sandy clay, no polishing of surface and lower degree of firing, sometimes surface rusticated by straw.

It appears in the context: Moravian Corded Ware settlement features, in Moravian Corded Ware graves and in Bell Beaker Culture features including decorated bell beakers and bowls.

Group B: Quality ware, well fired whit polished surface, engoba, commonly found with decorated beakers. It appears only in Bell Beaker Culture context.

The A group is prevalent over the B group, the ratio is about 30:6.

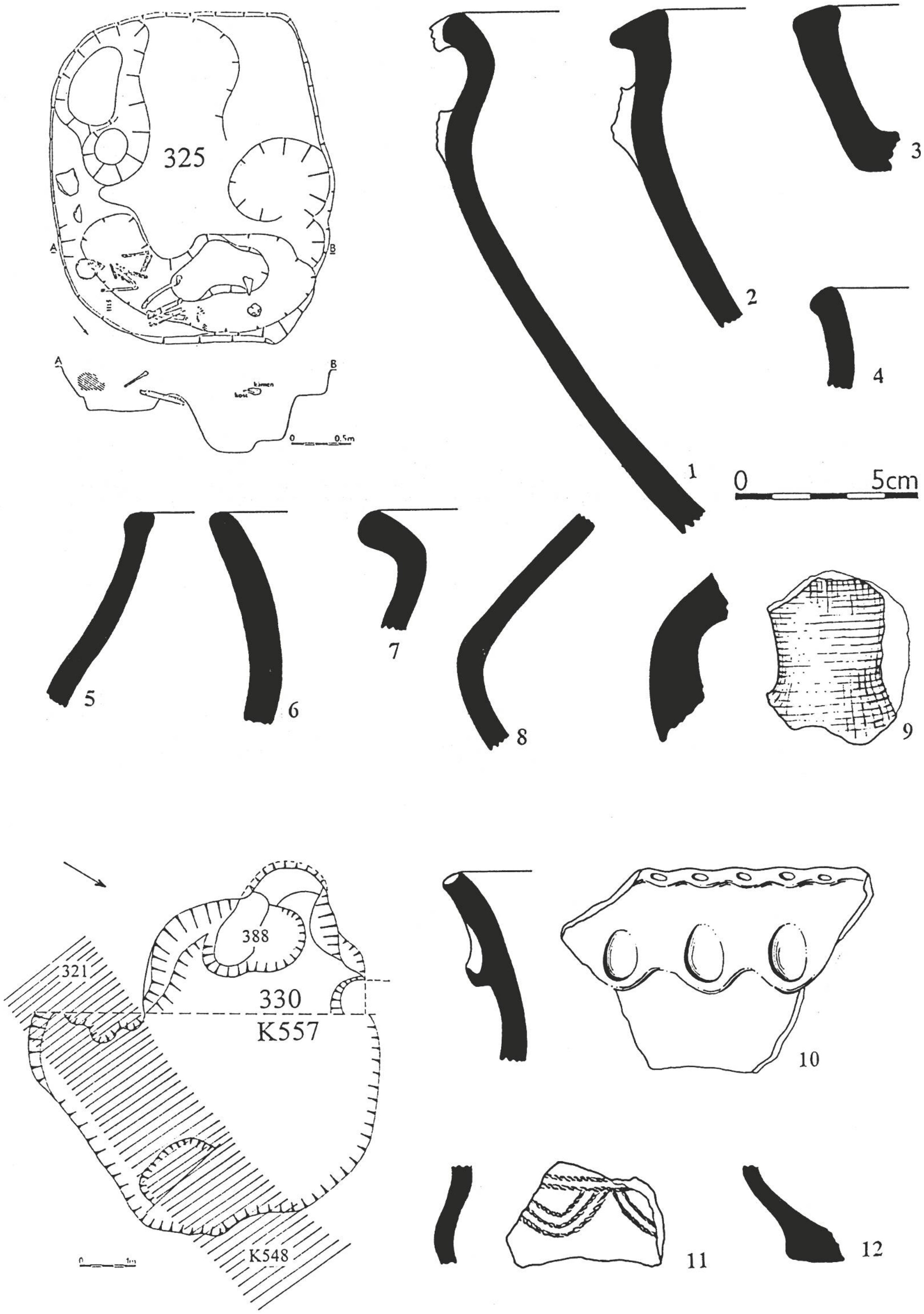
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Fig. 19. Olomouc-Slavonín – Horní lán 1995-1997, 2001. 1-9 – finds from feature 325 with A type of Begleitkeramik; 10-12 – pottery of the earliest "A-horizon" of Corded Ware and Globular Amphora pottery from feature 330/K557.

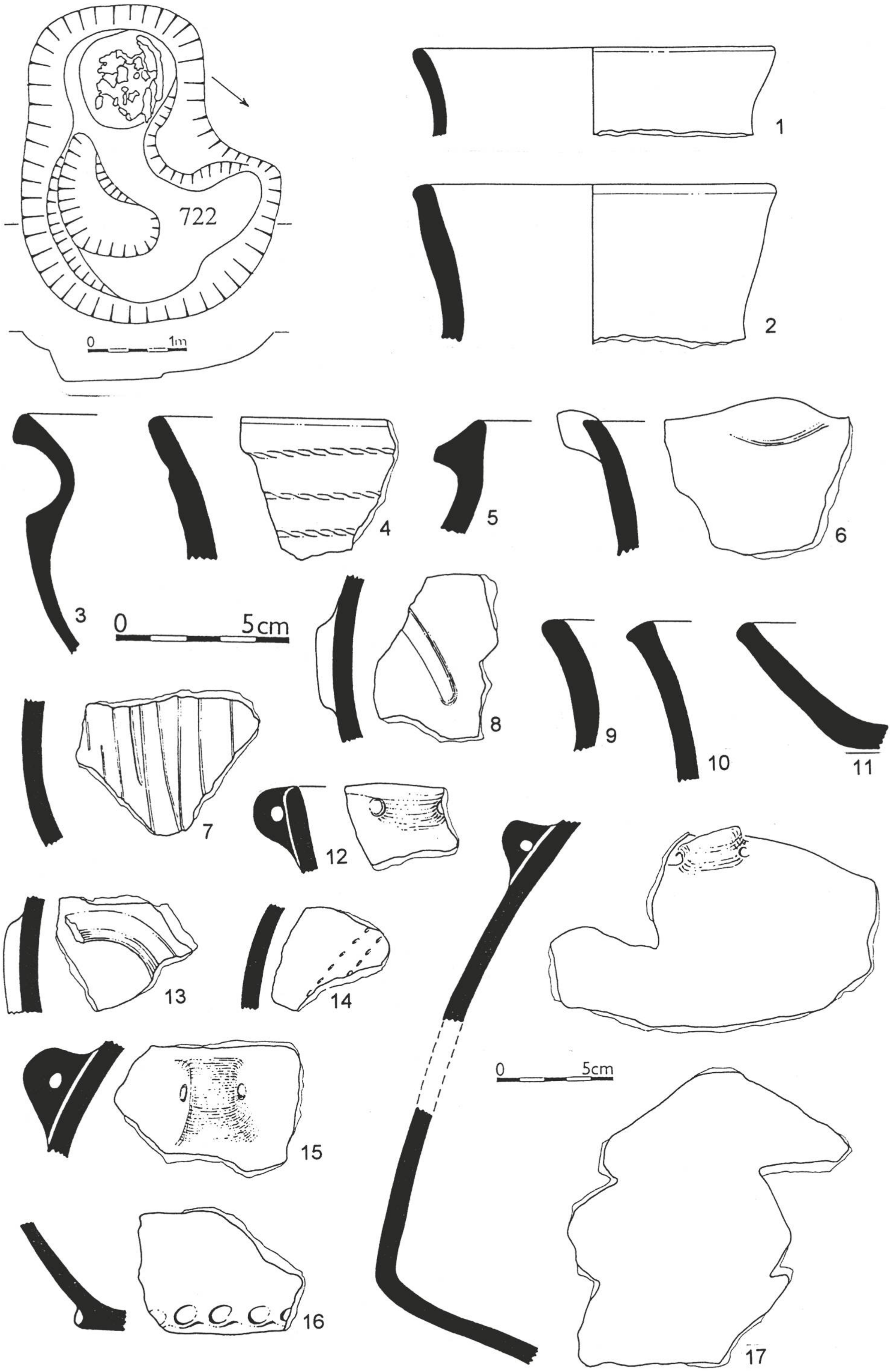
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Fig. 20. Olomouc-Slavonín – Horní lán 1995-1997, 2001. Finds from feature 722 with A type of Begleitkeramik (typological features of this pottery are near to Corded Ware tradition).

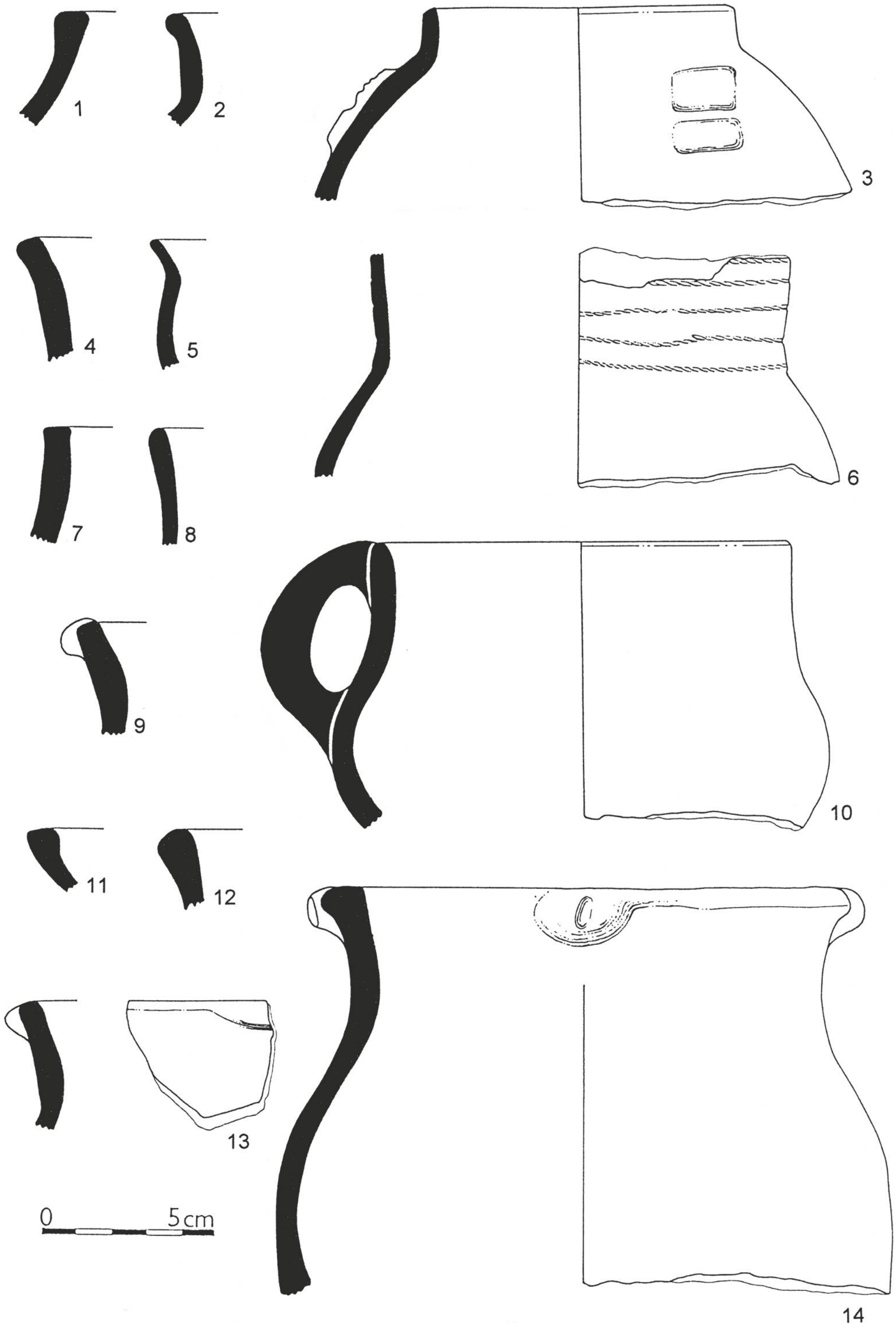
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Fig. 21. Olomouc-Slavonín – Horní lán 1995-1997, 2001. Finds from feature 722 with A type of Begleitkeramik (typological features of this pottery are near to Corded Ware tradition).

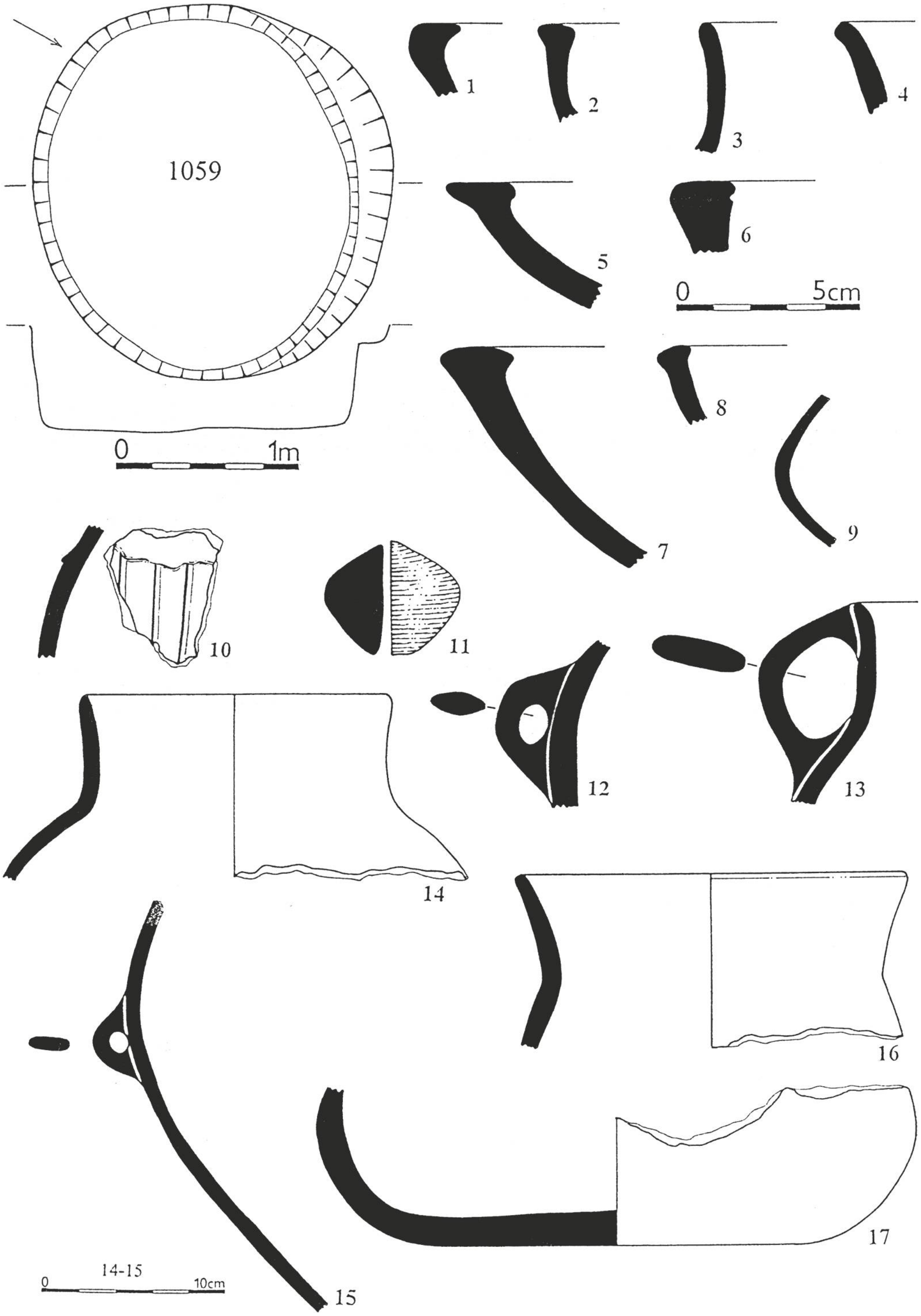
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Fig. 22. Olomouc-Slavonín – Horní lán 1995-1997, 2001. Feature 1059 with A type of Begleitkeramik (typological features of this pottery are near to Bell Beaker tradition).

Spatial distribution of both groups

There is no stratigraphy between both pottery groups. Features with the group A are distributed in the north-west of the excavated area, group B creates a smaller group in the south-eastern part. There seems to be group B about 250 m far from the group A features and between them there are some features of the Moravian Corded Ware with A group pottery, without any decorated Beaker ware (Fig. 20-21). There are also features with the A group of Begleitkeramik, but with the characteristics of Bell Beaker features in pottery typology (such as pit 1059, see Figs. 22-23) It would be possible to establish a clearer chronology of the Beaker settlement only after the final processing of finds. The smaller group of features with the B type of Begleitkeramik appears to have all traits of the classical Bell Beaker culture including the variability of the accompanying pottery and a high number of decorated beakers and bowls (cf. feature No. 964 with almost 20% of decorated ware see Turek / Peška 2001, Fig. 11, here Figs. 24-25). Amongst these contexts are on the other hand missing the typologically later types of pottery, such as, lower sharper profiled shapes, incised decoration or plastic "moustache" under handles.

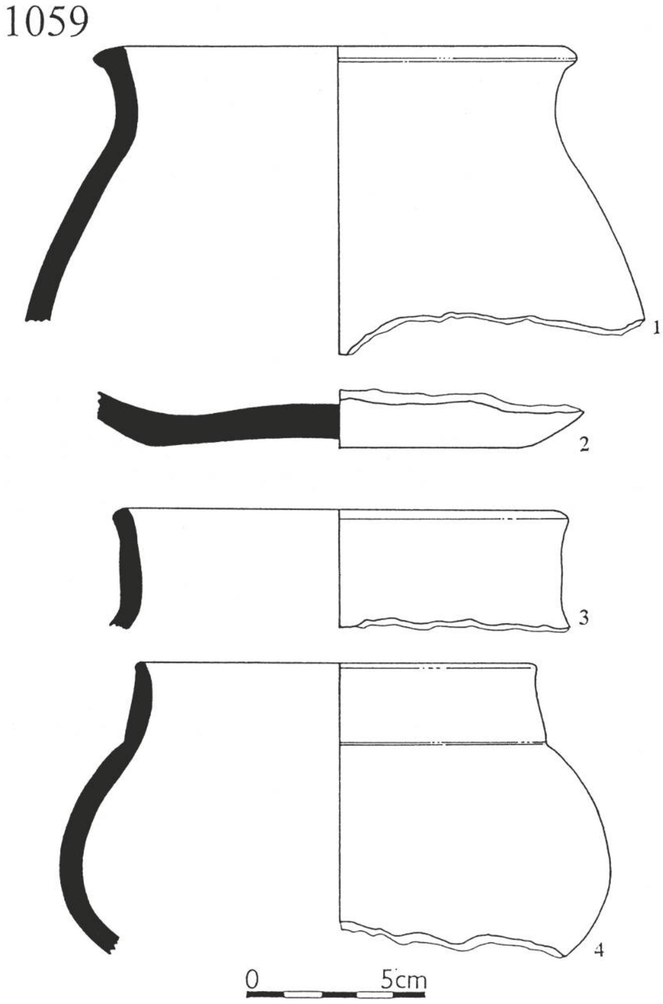

Fig. 23. Olomouc-Slavonín – Horní lán 1995-1997, 2001. Feature 1059 with A type of Begleitkeramik (typological features of this pottery are near to Bell Beaker tradition).

The contexts with the A type of *Begleitkeramik* A are, however, prevalent at Slavonín (circa 30 to 6). There is a lower number of decorated ware, which is however made up to the same technological standards. Within the B group never appear the types of the A group and the Moravian Corded Ware pottery. The group B does not include pots with highly profiled wide rims, but the bowls with T-shaped flattened rims seems to be prevalent. The B group seems to be spatially isolated including the adjacent burial group represented by similar pottery.

Conclusion

Assemblages of funerary pottery were usually carefully selected and they are representing certain identity, sometimes ideologically defined. The chronology based on funerary pottery therefore make an impression of a sharp cut in the material culture as it is ideologically represented in the intentional and fundamental change of burial rites.

Settlement pottery is perhaps less ideological and is more likely to witness the continual change!

Most of the new data from sites in central Moravia are difficult to be clearly interpreted. In the case of the two technological groups of pottery appearing in Slavonín we can only put forward some hypotheses as possible explanation of these phenomena, however, there are no data to prove which one may be right:

Are there two chronologically and perhaps "genetically" (?) different settlements with the common background of the Begleitkeramik, but with different local tradition of production?

Is it the first evidence of continual transition between the local Moravian Corded Ware and the Bell Beaker "Begleit" tradition? This would challenge the earlier assumptions that the Begleitkeramik is a later element of the originally "universal" Bell Beaker complex.

There is also a theoretical possibility that these two different pottery styles are witness of some kind of social differentiation within one community? Coexistence of two groups with different cultural tradition (Corded Ware and Bell Beaker) sharing the same settlement area and to certain extend also domestic pottery, but keeping different funerary habits?

In central Moravia there are several tasks that should be carefully observed by the contemporary archaeological research, such as spatial relations of the Corded

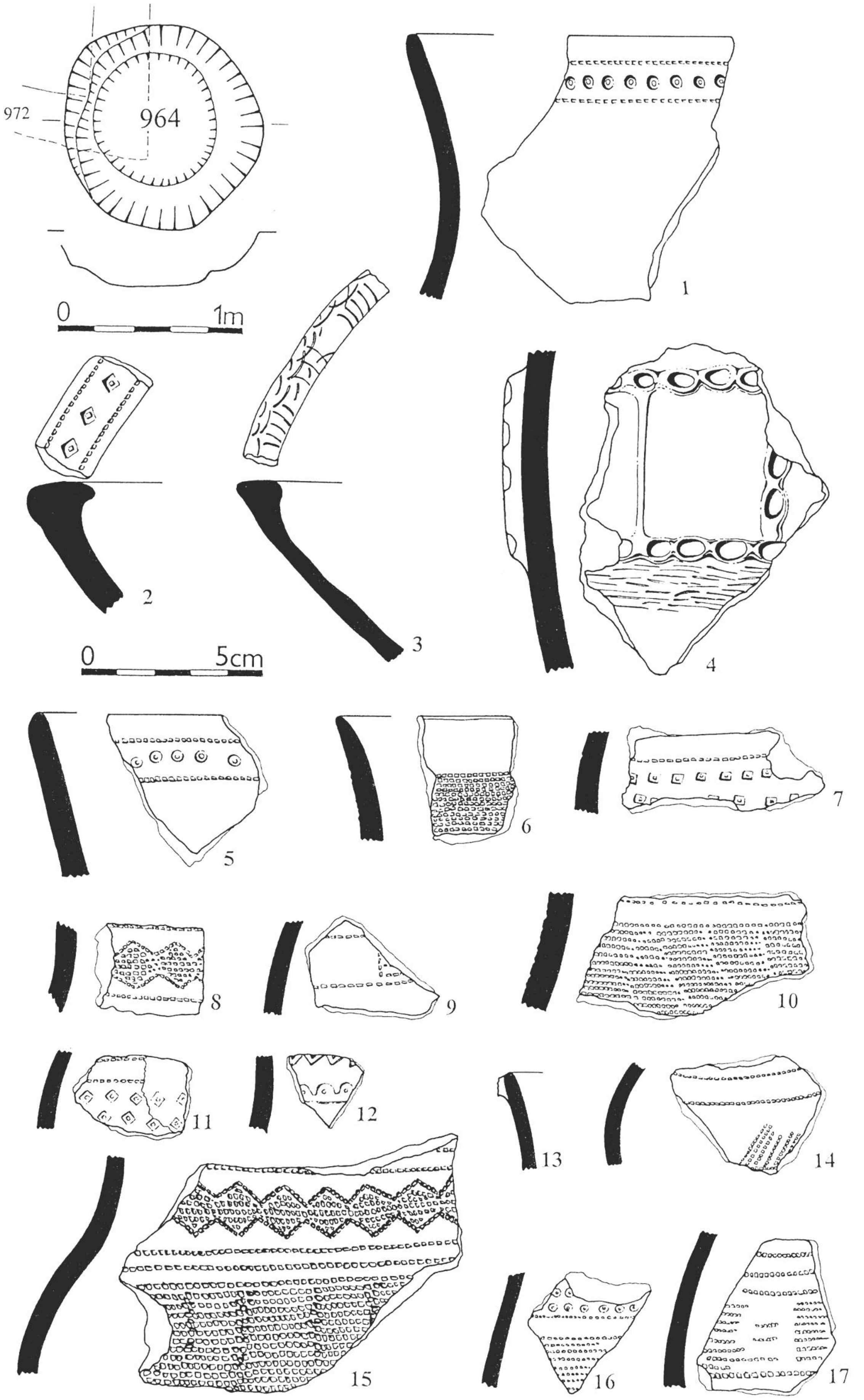
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Fig. 24. Olomouc-Slavonín – Horní lán 1995-1997, 2001. Feature 964. B type of Begleitkeramik and classical Beaker pottery.

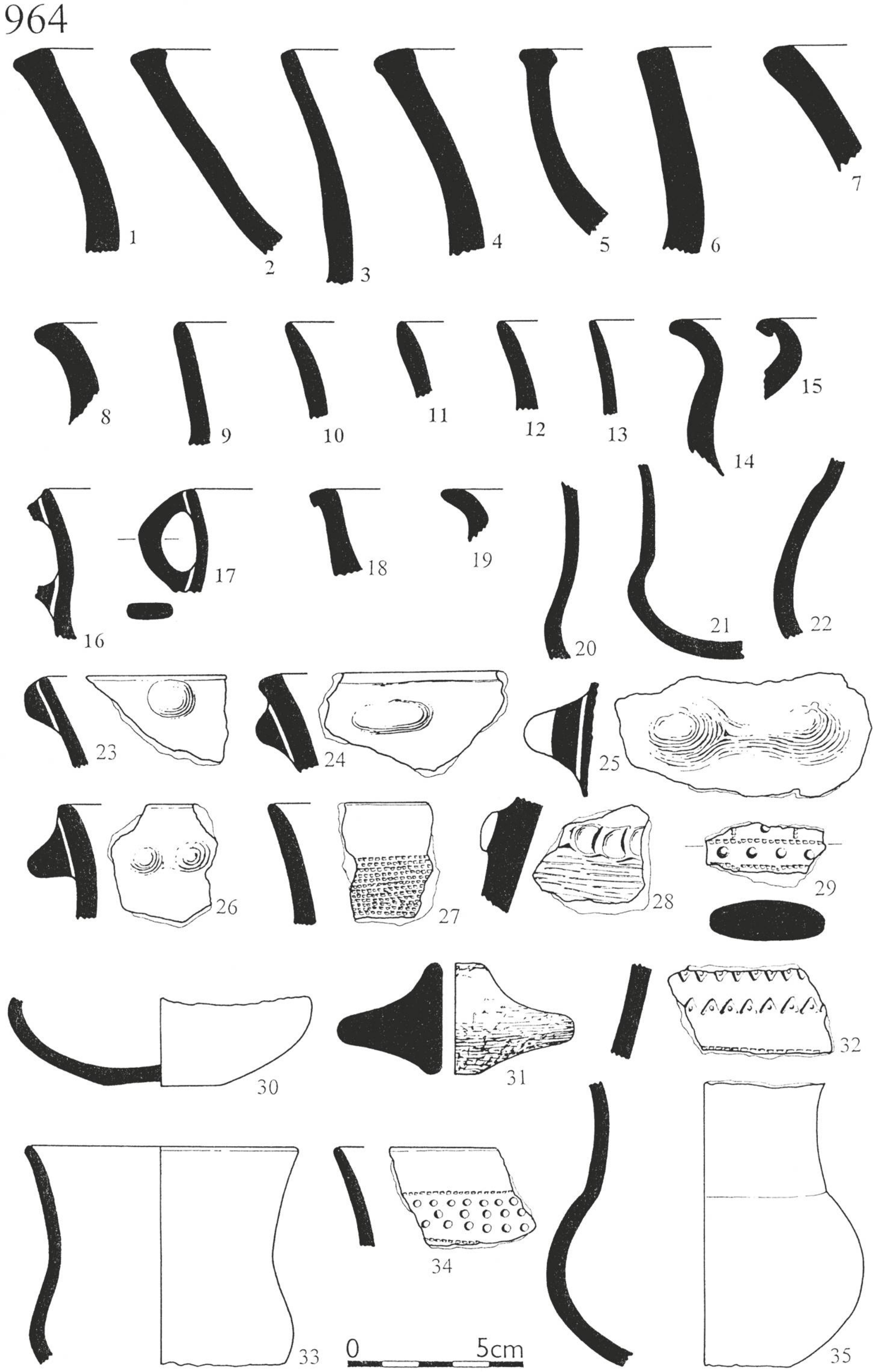
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Fig. 25. Olomouc-Slavonín – Horní lán 1995-1997, 2001. Feature 964. B type of Begleitkeramik and classical Beaker pottery.

Ware cemeteries and the settlement sites classified as the Local Corded Ware and Bell Beaker. It is important to mention the special character of some Corded Ware cemeteries in central Moravia. Their assemblages and body positioning are keeping the traditions of the Corded Ware burial rite, however, their orientation is up to the Bell Beaker fashion (north-south, south-north). Another puzzle is also the lack of clearly Beaker burial contexts.

The ongoing question of continuity and discontinuity between late Eneolithic cultural groups may become clearer if analysed on the domestic material culture from settlements.

References

DVOŘÁK P. 1993. Lid se zvoncovitými poháry. In: PODBORSKÝ V. (ed.), *Pravěké dějiny Moravy*, Vlastivěda Moravská, Země a lid, nová řada, sv. 3, 218-232. Brno.

DVOŘÁK P. / ONDRÁČEK J. 1992. Siedlungen der Glockenbecherkultur in Mähren. Nepublikovaný rukopis. Brno.

HÁJEK L. 1968. *Kultura zvoncovitých pohárů v Čechách*. Archeologické studijní materiály 5. Praha.

KYTLICOVÁ O. 1960. Eneolitické pohřebiště v Brandýsku. *Památky archeologické* 61, 442-474.

LANTING J. N. / VAN DER WAALS J. D. 1976. Beaker Culture Relations in the Lower Rhine Basin. In: LANTING J. N. / VAN DER WAALS J. D. (eds.), Glockenbecher Symposion Oberried 1974, 1-80. Bussum - Haarlem.

MOUCHA V. 1966. Nécropole a Mochov (Boheme). In: FILIP J. (ed.), Investigations archéologiques en Tchécoslovaquie, 107. Prague.

MATĚJÍČKOVÁ A. 1999. Sídliště kultury zvoncovitých pohárů v Žádovicích (okr. Hodonín). In: *Pravěk Supplementum* 5, 101-151. Brno.

NEUSTUPNÝ E. / SMRŽ Z. 1989. Čachovice - pohřebiště kultury se šňůrovou keramikou a zvoncovitých pohárů. *Památky archeologické* 80, 282-383.

PAVLŮ I. 2000. První sídliště kultury zvoncovitých pohárů na Čáslavsku. In: *Sborník Miroslavu Buchvaldkovi*, 195-199. Most.

PEŠKA J. 1998. Osídlení lokality Olomouc-Slavonín v období eneolitu. In: PEŠKA J. (ed.), *Ročenka ÚAPP Olomouc 1997*, 70-82. Olomouc.

PEŠKA J. 2000. Otázka sídlišť kultury se šňůrovou keramikou na Moravě. In: *Památky archeologické, Supplementum 13*, In Memoriam Jan Rulf, 341-348. Praha.

REHMAN F. / ROBINSON V. J. / SHENNAN S. J. 1992. A neutron activation study of Bell Beakers and associated pottery from Czechoslovakia and Hungary. *Památky archeologické* 83, 197-211.

SALANOVA L. 2000. *La question du Campaniforme en France et dans les iles anglo-normandes. Productions, chronologie et roles d'un standard ceramique.* Editions du Comite des Travaux Historiques et Scientifiques Societes prehistorique Francaise. Paris.

SANGMEISTER E. 1963. Exposé sur la civilisation du vase campaniforme. In: *Les civilisations atlantiques du néolithique a l'age du fer. Actes du premier collogue atlantique Brest 1961*, 25-56. Brest.

SKRUŽNÝ L. / TUREK J. / VOJTĚCHOVSKÁ I. 2000. Pohřebiště z období zvoncovitých pohárů ve Velkých Přílepech – Kamýku, okr. Praha-západ. *Archeologie ve středních Čechách* 4/1, 59-78. Praha.

TUREK J. 1993. Osídlení z období zvoncovitých pohárů v povodí řeky Bíliny v severozápadních Čechách. Unpublished manuscript of MA thesis, Department of Archaeology, Charles University. Prague.

TUREK J. 1996. Osídlení Pražské, kotliny v závěru eneolitu. Nástin problematiky období zvoncovitých pohárů. *Archaeologica Pragensia* 12, 5-58. Praha.

TUREK J. 1998. The Bell Beaker Period in north-west Bohemia. In: BENZ M. / VAN WILLIGEN S. (eds.), *Some New Approaches to the Bell Beaker 'Phenomenon'. Lost Paradise...?* British Archaeological Reports. International Series 690, 107-119. Oxford.

TUREK J. 2001. Stone axes as tools, valuables and symbols (3300-1900 BC). In: GEORGHIU D. (ed.), *Material, Virtual and Temporal Compositions: On the Relationship between Objects*, British Archaeological Reports International Series 953, 53-62. Oxford.

TUREK J. / DANĚČEK V. 1997. Nově objevená eneolitická naleziště na Kladensku a Slánsku. Poznámky ke studiu kamenné broušené industrie českého eneolitu. *Archeologie ve středních Čechách* 1, 127-141.

TUREK J. / DANĚČEK V. 2000. Nedestruktivní průzkum na hradišti v Praze Butovicích. *Archaeologica Pragensia* 15. Praha.

TUREK J. / PEŠKA J. 2001. Bell Beaker settlement pattern in Bohemia & Moravia. In: NICOLIS F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*. Proceedings of the International Colloquium in Riva del Garda 11-16 May 1998. 411-428. Trento.

VAŘEKA P. 1995. Nálezy mazanice v archeologických strukturách – deskriptivní systém a databáze MAZANICE. *Archeologické Fórum* 4, 59-64.

VAŘEKA P. 1997. Výzkum sídliště knovízské kultury v Praze 5 – Velké Chuchli. *Archeologické rozhledy* 49, 333-342.

ZÁPOTOCKÝ M. 1960. Sídliště kultury zvoncovitých pohárů u Kozel na Neratovicku. *Památky archeologické* 51, 5-26.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

BELL BEAKER AND ÚNĚTICE BURIAL RITES.
CONTINUITY AND CHANGE IN FUNERARY PRACTICES AT THE BEGINNING OF BRONZE AGE

Magdalena Kruťová (Prague, Czech Republic)

Introduction

Cultures of the Late Eneolithic and the beginning of Bronze Age (Corded Ware, Bell Beaker and Únětice Culture) represent a significant continuity in the symbolic system of burial practices. However, there seems to be certain similarities and continual habits, as well as specific ritual behavioural that differs between individual periods and regions. In my article I am going to examine the continuity and change in funerary practices at the beginning of Bronze Age in Bohemia and Moravia.

In order to demonstrate the change and continuity in this period I present a table (Fig. 1) with different cultural phenomena as they appear on different levels from community area to the level of body deposition and burial assemblages.

Level	Phenomenon	Continuity	Change
Landscape	Settlement pattern	Similarity in land use	more visible settlement structures
Community area	Spatial relatioship between cemeteries and other areas	close proximity of burial and residential areas	settlement burials
Cemetery	Spatial organisation of cemeteries		
Form of burial	Construction an use of burial monuments, funerary practices	burial mound tradition reuse of burial monuments	more compact burial groups, alignments, accumulative settings

Fig. 1. A table showing different cultural phenomena as they appear on different levels from community area to the level of body deposition and burial assemblages.

Community area level

As a community area according to the theory introduced by E. Neustupný (NEUSTUPNÝ 1986, 1991) I understand: "a concept relating to live culture. A structured union of activity areas exploited by one community over a period of time" (NEUSTUPNÝ 1998, 135). We can see continuity in close proximity of burial and residential areas, which is known from many Únětice sites. As example we can use Březno near Louny (PLEINEROVÁ 1972) where we can see two burial sites with long houses settlements closed to them (Fig. 2). The similar pattern is being discussed for the Bell Beaker settlement and burial sites, however there is lack of relevant data.

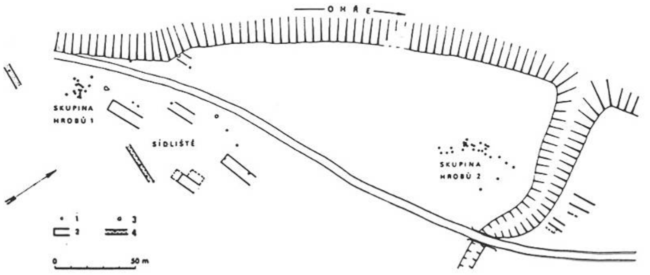

Fig. 2. Březno (district Louny, north Bohemia). Únětice settlements with long houses in a close spatial relation to the adjacent burial groups (after PLEINEROVÁ 1972, 371, obr. 1).

The change in burial rites can be seen in Únětice settlement features secondarily used as burial pits. Some of the Únětice cemeteries are overlapping the residential areas using the settlement features as secondary grave pits.

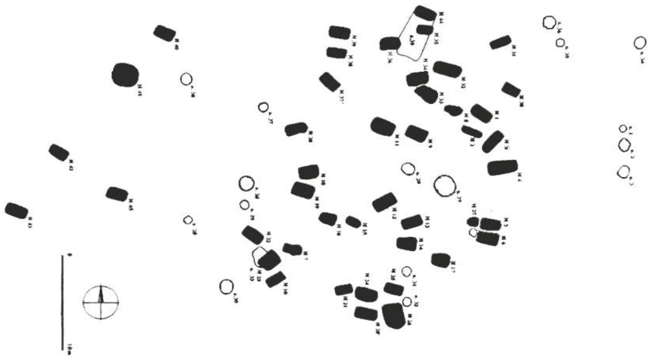

Fig. 3. Slavkov (district Brno–venkov, south Moravia). Únětice period cemetery overlapping the contemporary settlement (outlined represent settlement features, black inhumations burials, after HORÁLKOVÁ-ENDEROVÁ / ŠTROF 2000, obr. 2).

Such as it was at the Únětice cemetery overlapping the contemporary settlement at Slavkov in south Moravia (Fig. 3). The bodies in the settlements pits are buried in ritual position and assembled with the same grave goods as those buried on the cemetery (Fig. 4). The question is – wether these types of burials are representing some distinctive social group or just another evidence of weakening of the strict rules of burial rites at the time of Early Bronze Age.

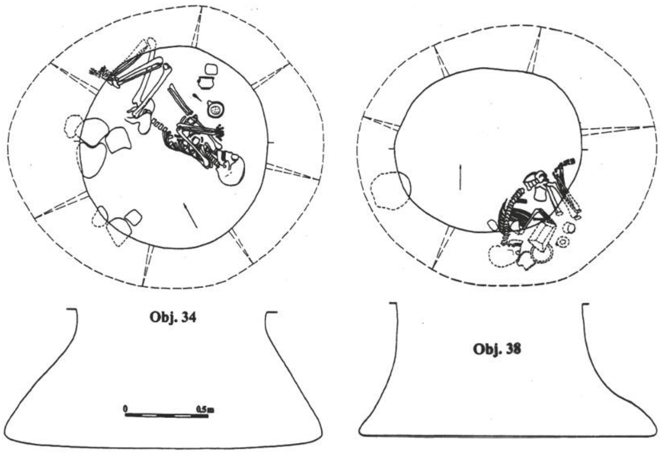

Fig. 4. Slavkov (district Brno – venkov, south Moravia). Únětice settlement features No. 34 and 38 secondarily used for inhumation (after Horálková-Enderová / Štrof 2000).

Cemetery level

Spatial organisation of cemeteries

The spatial structure of cemeteries, however, changed dramatically. The Bell Beaker culture usually kept certain distance between their burials as is possible to demonstrate on the typologically early example of the elite graves inside circular ditches at Tvořihráz in Southern Moravia (Bálek / Dvořák / Kovárník / Matějíčková 1999) (Fig. 5) or even possibly later cemetery with "Begleitkeramik" at Lochenice in eastern Bohemia (Buchvaldek 1990) (Fig. 6). These distances are probably respecting the diameter of barrows that covered most of the burials. Beaker cemeteries are therefore covering a more extensive area.

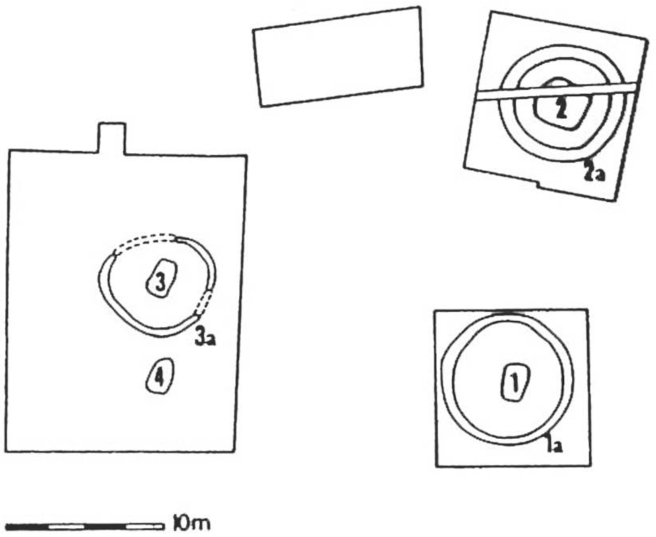

Fig. 5. Tvořihráz (district Znojmo, south Moravia) a group of Bell Beaker burials with circular ditches (after Bálek / Dvořák / Kovárník / Matějíčková 1999, 80, Tab. 2).

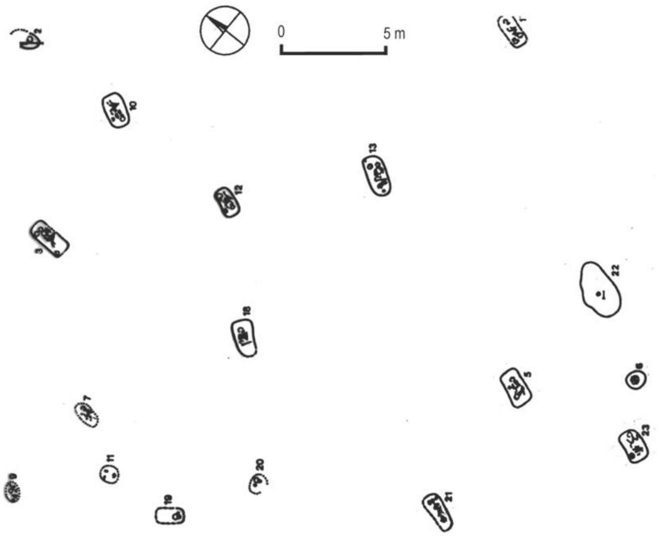

Fig. 6. Lochenice (district Hradec Králové, east Bohemia). Bell Beaker cemetery (after Buchvaldek 1990, 33, Abb. 7).

The Únětice cemeteries are usually more compact, keeping limited distances between the individual burials creating either more or less organised alignment such as the cemetery of Těšetice-Vinohrady in southern Moravia (Fig. 7) or an accumulation of several burials into relatively limited space such as the compact burial group at Dolní Beřkovice in central Bohemia (Fig. 8). These concentrated groups might have been covered by an accumulative collective burial mound. This may be indicative of a greater importance of ranking (families, clans) within the Únětice communities.

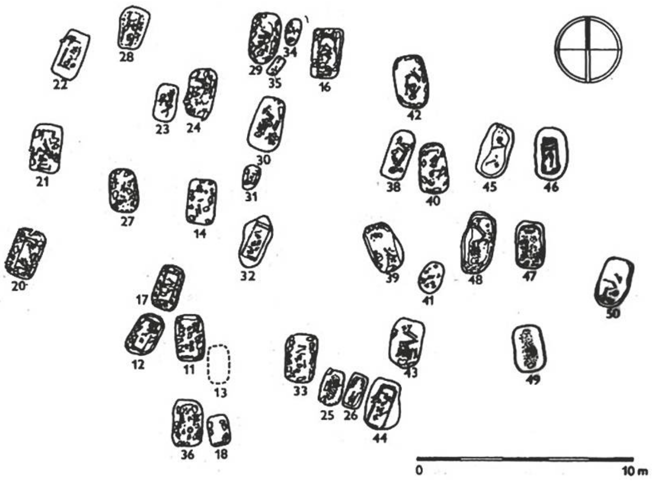

Fig. 7. Těšetice-Vinohrady (district Znojmo, south Moravia). Únětice cemetery (after Podborský (ed.) 1993, obr. 149).

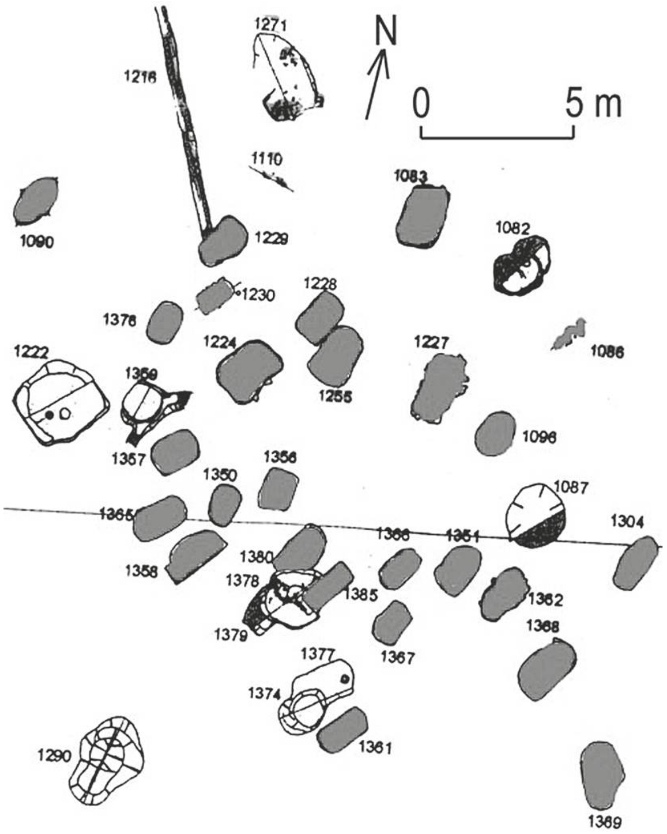
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Fig. 8. Dolní Beřkovice (district Mělník, central Bohemia). Circle-like accumulation of Únětice burials (unpublished excavation P.J. Foster 2000).

Burial level

Construction and use of burial monuments - burial mounds

The modern agriculture turned most of the central European countryside into arable land and destroyed almost all remains of the above ground burial constructions such as burial mounds. Despite of this limit there seems to be an evidence of continual use of barrows from the Corded Ware period to the Únětice period. The burial mounds were convincible proved for the Corded Ware and Bell Beaker Culture already on many sites, such as at Čachovice (Neustupný / Smrž 1989) or Tvořihráz (Bálek / Dvořák / Kovárník / Matějíčková 1999). There are also several sites in the eastern part of central Moravia, such as Dřevohostice or Kostelec na Hané, where Corded Ware and Bell Beaker barrows survived to the present day. Burial mounds were recorded also for the Únětice Culture in central Bohemia on the site of Čejetičky-Choboty near Mladá Boleslav (Plesl 1959, 1963).

Secondary burials

Secondary burials inserted into burial mounds or circular ditches are known already in the Bell Beaker period. This practice, however became much more common during the Únětice period, where the multiple secondary burials appear on many cemeteries. There is an evidence of re-opening of primary burials, possible ritual treatment and re-burial of some human remains. The evidence ranges from an empty grave pit without a removed skeleton (this is proved by the phosphate analysis) to the secondary burial with skeletal remains and grave goods squashed into a half-meter long box (Fig. 9) such as in the case of the cemetery at Prague – Miškovice (Ernée 2000).

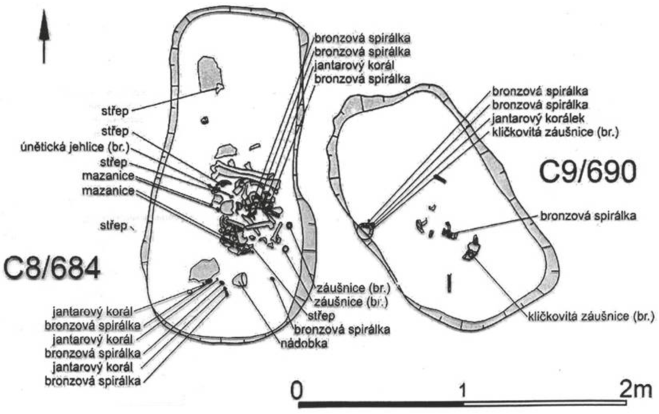
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Fig. 9. Prague 9 – Miškovice (district Prague). Secondary burial with skeletal remains and grave goods squashed into a box (after Ernée 2000, obr. 3)

Internal construction of graves

During the classical Únětice culture appears a new phenomenon in grave constructions (Fig. 10), which is using stone lining of grave walls or stone packing of whole grave pit or even stone cobbled bottoms of graves. Another new element that was unknown in the Bell Beaker funerary practices is use of wooden coffins on Únětice cemeteries as we may see on the example from Rebešovice in southern Moravia (Fig. 11).

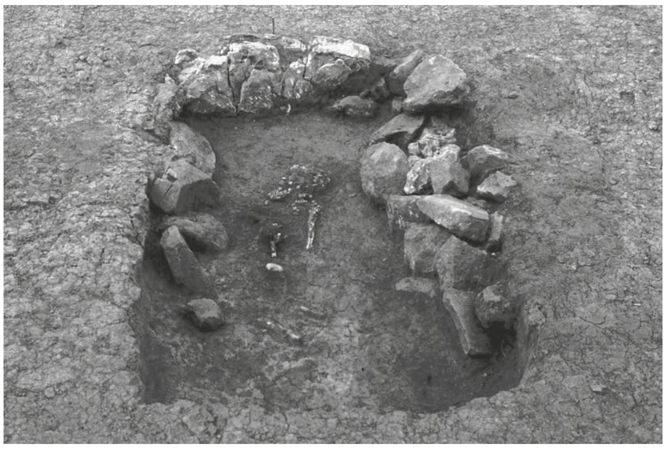

Fig. 10. Nové Butovice (district Praha, central Bohemia). New phenomenon in the Únětice grave constructions using stone lining of grave walls and stone packing of whole grave pit (photo by Jan Turek).

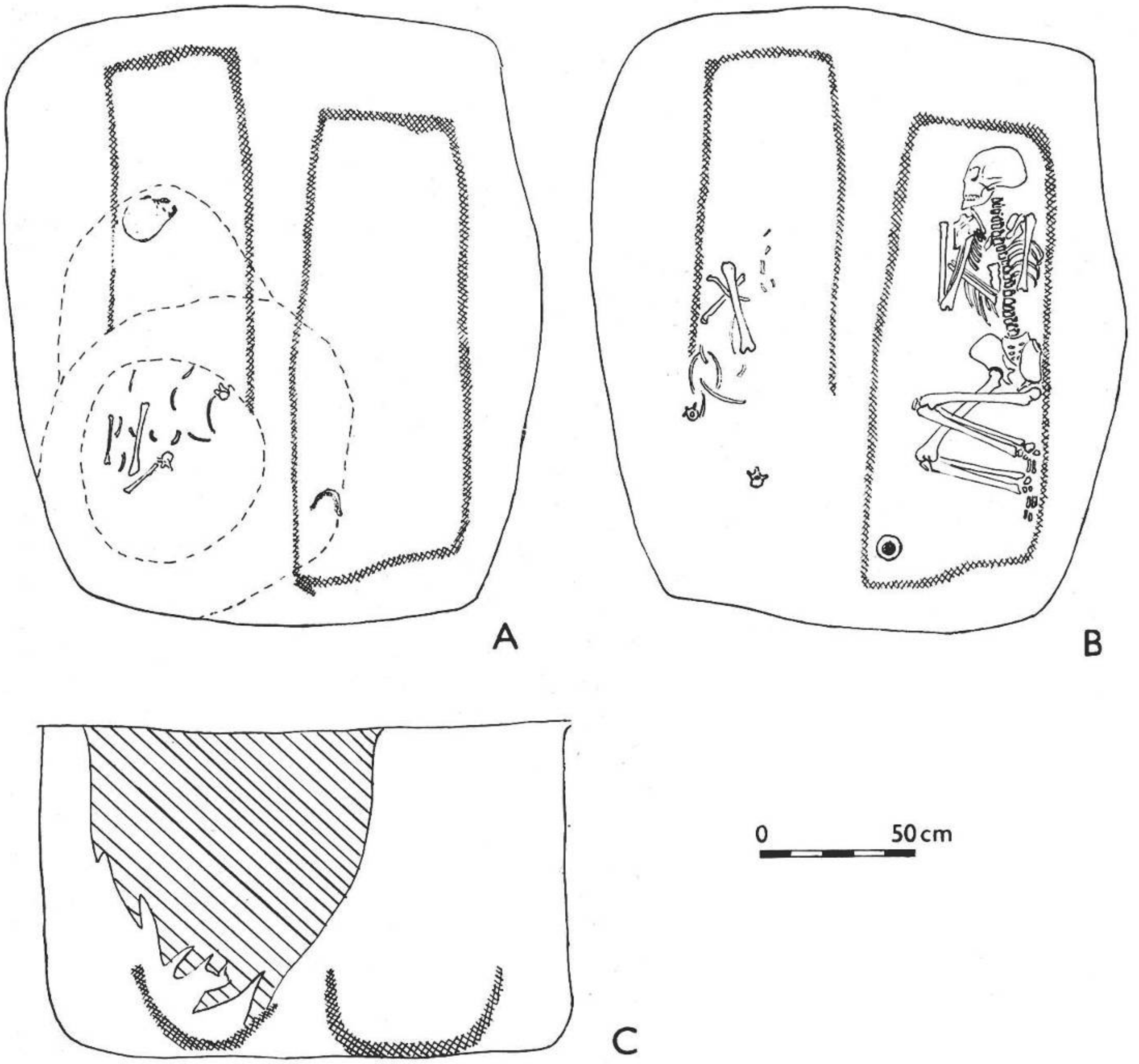

Fig. 11. Rebešovice (district Brno-venkov, south Moravia). Grave 192 use of wooden coffins and an evidence of re-opening and secondary treatment of skeletal remains (after STUCHLÍK 1990, Abb. 1).

Burial rites level

Method of disposing body

In the Late Eneolithic and Early Bronze Age burial rites inhumations are clearly dominating. The change in the Únětice culture can be seen in total absence of cremation burials that represented an important minority alternative to the prevailing inhumations in the Bell Beaker period.

Another question that is concerning mainly Bohemian group of Bell Beaker cemeteries is the missing evidence of female inhumations. In Bohemian Beaker cemeteries are about 50% of female burials missing (Fig. 12). This seems to be very clear in comparison to the account of anthropological material of the Corded Ware

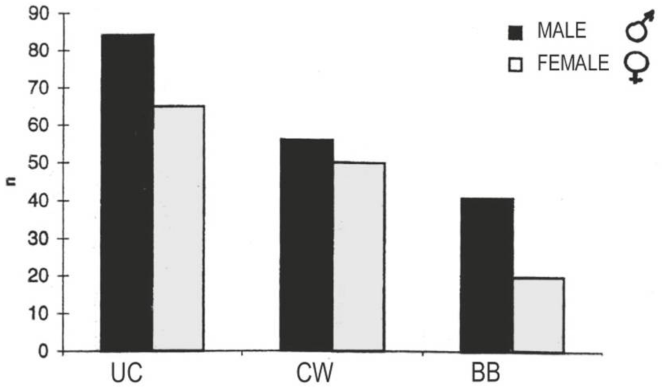

Fig. 12. The comparison of analysed anthropological material of the Corded Ware, Bell Beaker and Únětice period from Bohemia (n – number of cases). In Bohemian Bell Beaker cemeteries are about 50% of female burials missing (after ČERNÝ 2000, obr. 1).

and Únětice period from the same region. This obvious lack of female inhumations may possibly by an evidence of some alternative method of disposing the body and differentiation between particular social categories.

Something almost unknown in the Bell Beaker cemeteries is the post-funeral treatment of human remains or burial assemblages, which seems to be one of the most significant changes in the perception of integrity of burial contexts during the early Bronze Age. In the Únětice period this behavioural became very common and in some cases it almost seems to be a norm. For example from the cemetery of Rebešovice we can see the evidence of secondary opening of graves and removal of human remains (Fig. 11). Most of these secondary entries into the graves were traditionally interpreted as grave robbery. Shifting of human bones and artefacts is however so frequent in the Early Bronze Age, that it almost seems to be an integral part of the mortuary practices.

Certain continuity between Bell Beaker and Únětice burial rites is in the positioning of body in a grave. Inhumations of both periods are contracted and orientated in the meridian direction (north-south). The tradition continues also in the positioning of arms.

What changed is the gendered body positioning in the grave. Within the Bell Beaker burial rites is dominating the principle of male – female distinction, which is mainly demonstrated in the body position in grave. These gender distinctions disappeared within the Únětice cemeteries, however, the gendered artefacts, are still dividing burials into male and female category.

Specific gendered artefacts

As male prestigious goods remain metal daggers that were indicative of the social status amongst men already in the Bell Beaker period. The battle-axes, which were a common element of male burial assemblage in the Corded Ware period and disappeared entirely from the material culture during the Bell Beaker period, re-appeared (but only rarely) again in the Únětice Culture. Also the symbolic significance of Beaker archery seems to diminish in the Early Únětice and later entirely disappears from the burial context.

Distinctive group of the Bell Beaker graves are those with mixed gendered funerary equipment. These are for example rich woman's grave from Záhlinice (in Central Moravia) with mixed female and male equipment (Fig. 13). It is necessary to note that these copper daggers are accompanying rich and typologically early female burials and that their size is a miniature of the average daggers (Turek 2002, 224). Some male prestigious artefacts might have been used also in female context (it is rarely opposite). It is possible that this was supposed to reinforce the order of social differentiation and that these graves represent the social elite.

Other evidence of ritual behavioural

Into this category I rank the hoards of bronze objects that appears during the Early Bronze Age. This type of archaeological features is unknown in the Bell Beaker period. It seemingly does not refer to the burial rites, however it should be emphasised that certain types of artefacts, which appear in hoards are usually rare in the burial context such as bronze axes or metal bars. There may be possible connection between the restriction of certain artefacts in the burial context and their significance in the votive offerings.

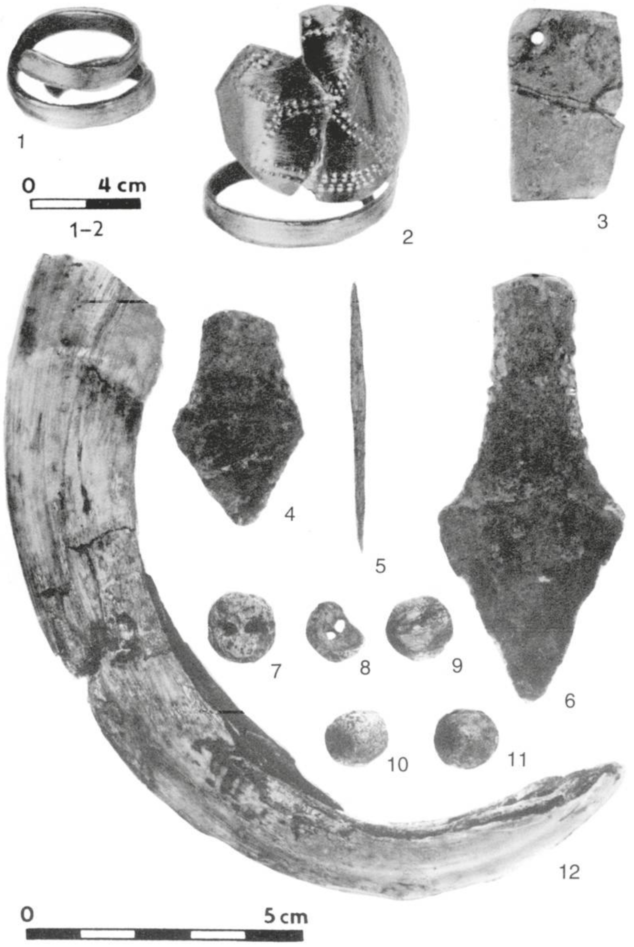

Fig. 13. Záhlinice (district Kroměříž, central Moravia). Rich woman's grave with mixed female and male equipment (after Dvořák / Rakovský / Stuchlíková 1992, Tab V:4, 6).

Conclusion

Relatively orthodox structure of the Bell Beaker burial rites, which is only one of the elements of the Beaker symbolic system perhaps formally represents certain cultural identity, norms and social relations.

As opposed to the Beaker period the burial rites of the Early Bronze Age are generally less orthodox and more variable, using more complex mortuary system including number of post-funeral practices and secondary burials.

Despite of certain specifics of the Early Bronze Age ritual behaviour I suppose that the structure of symbolic systems of the Únětice burial practices is result of the continual development within the Late Eneolithic cultural sequence and it is a witness of the progressing social differentiation of the Central European Bronze Age.

References

BÁLEK M. / DVOŘÁK P. / KOVÁRNÍK J. / MATĚJÍČKOVÁ A. 1999. Pohřebiště kultury zvoncovitých pohárů v Tvořihrázi (okr. Znojmo). *Pravěk – Supplementum* 4, 9–98.

BUCHVALDEK M. 1990. Pohřebiště lidu se zvoncovitými poháry. In: *Lochenice. Z archeologických výzkumů na katastru obce.* Praehistorica XVI, 29–49. Praha.

ČERNÝ V. 2000. Antropologická analýza pohřebiště kultury se zvoncovitými poháry z Velkých Přílep – Kamýku. *Archeologie ve středních Čechách* 4, 79–84.

DVOŘÁK P. / RAKOVSKÝ I. / STUCHLÍKOVÁ J. 1992. Pohřebiště lidu s kulturou se zvoncovitými poháry u Záhlinic, okr. Kroměříž. *Pravěk NŘ* 2, 215–232.

ERNÉE M. 2000. Hroby únětické kultury z Prahy 9 – Miškovic (Příspěvek k diskusi o smysluplnosti zkoumání „dalších“ únětických hrobů). In: ČECH P. / DOBEŠ M. (eds.), *Sborník Miroslavu Buchvaldkovi*, 71–76. Most.

HORÁLKOVÁ-ENDEROVÁ P. / ŠTROF A. 2000. Pohřebiště a sídliště kultury únětické ze Slavkova u Brna, okr. Vyškov. *Pravěk – Supplementum* 6, 9–91.

NEUSTUPNÝ E. 1986. Sídelní areály pravěkých zemědělců. *Památky archeologické* 77, 226–234.

NEUSTUPNÝ E. 1991. Community areas of prehistoric farmers in Bohemia. *Antiquity* 65, 326–331.

NEUSTUPNÝ E. (ed.) 1998. *Space in prehistoric Bohemia*. Praha.

NEUSTUPNÝ E. / SMRŽ J. 1989. Čachovice – pohřebiště kultury se šňůrovou keramikou a zvoncovitých pohárů. *Památky archeologické* 80, 282–383.

PLEINEROVÁ I. 1972. Pravěké naleziště v Březně (výsledky výzkumu za posledních pět let). *Archeologické rozhledy* 24, 369–372.

PLESL E. 1959. Nálezy únětické kultury na mohylníku v Mladé Boleslavi - Čejetičkách. *Památky archeologické* 50, 34–53.

PLESL E. 1963. Únětická mohyla na pohřebišti v Mladé Boleslavi – Čejetičkách, v poloze “Choboty III”. *Archeologické rozhledy* 15, 415–423.

PODBORSKÝ V. (ed.) 1993. *Pravěké dějiny Moravy*. Brno.

STUCHLÍK S. 1990. Die sekundären Eingriffe in den Gräbern der Únětice Kultur. *Antropologie* 28, 159–167.

TUREK J. 2002. “Cherche la Femme!” Archeologie ženského světa a chyběyící doklady ženských pohřbů v Čechach. In: NEUSTUPNÝ E. (ed.), *Archeologie nenalézaného*, 217–240. Plzeň - Praha.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

CONTRIBUTION TO THE QUESTION OF CHIPPED STONE INDUSTRY THE MORAVIAN BELL BEAKER CULTURE[1]

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Studies on stone material of the Moravian Bell Beaker culture is a part of a broader project focused on the so-called Terminal Chipped Stone Industries, currently executed by Archaeological Institute of Academy of Sciences of Czech Republic, Brno, and Institute of Archaeology and Ethnology, Polish Academy of Sciences. The term „Terminal" is related to times from the Late Eneolithic Period till – generally – the end using stone for making tools. Practically, our interest covers the end of the Stone Age, the Early Bronze Age (BA after P. Reinecke) and the beginning of Middle Bronze (BB1).

We have already presented in details stone inventories of the Moravian Corded Ware culture and the Moravian Proto-Únětice culture (KOPACZ / ŠEBELA 1992; 1992a; 1998), as well as a general review of the issue (KOPACZ / ŠEBELA 2000; 2001). Probably the most important source in our studies – the material of Moravian Bell Beaker culture has not been so far adequately discussed. This report is the attempt to fulfill this gap in our knowledge.

The Moravian group of the Bell Beaker culture, or – in other words – the Moravian Bell Beaker culture (MBBC), is a very distinctive unit in scope of location, size, and impacts on the adjacent territories. In some ways it is an essence of the Bell Beaker culture in Central Europe and a reference point in studying other Bell Beaker groups in this region – Czech, Silesian, Lesser Polish, Hungarian, or Austrian. In this report we are not going to discuss the whole of questions related MBBC, such as its origin, settlement issues, or chronology. In relation to the latter, in our studies we have adopted typological/chronological concept of P. Dvořák (DVOŘÁK 1989). According to this author, MBBC material can by classified within three groups, denoted as Find Groups I through III, with Roman numerals (abb. FG I, etc.). These groups reflect not only typological evolution of the unit of our interest, but also its chronological sequence (Group I being the oldest, Group III – the youngest).

The catalogue of MBBC chipped stone finds presented in this report covers only the material published in the literature. All the finds have been recovered from graves. It should be underlined that these finds constitute only a part of the sources – the smaller

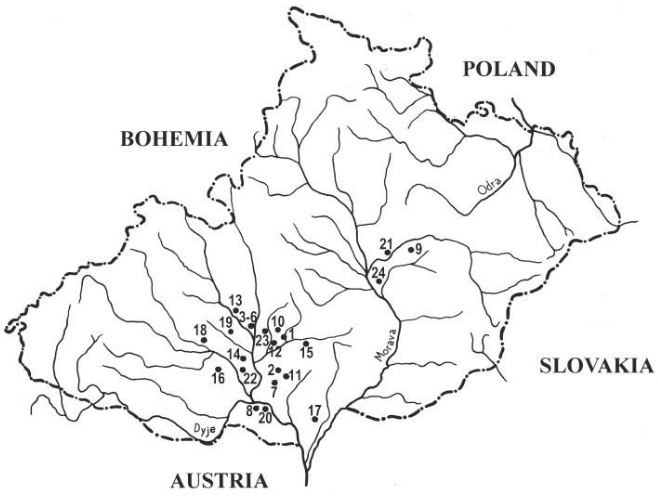

Fig 1. Selection of grave MBBC sites of with chipped stone material: 1 – Blažovice, Brno-venkov district; 2 – Borkovany, Břeclav district; 3 – Brno-Černá Pole, Brno-město district; 4 – Brno-Holásky, Brno-město district; 5 – Brno-Řečkovice, Brno-město district; 6 – Brno-Židenice, Brno-město district; 7 – Diváky, Břeclav district; 8 – Dolní Věstonice, Břeclav district; 9 – Holešov, Kroměříž district; 10 – Jiříkovice, Brno-venkov district; 11 – Klobouky, Břeclav district; 12 – Kobylnice, Brno-venkov district; 13 – Kuřim, Brno-venkov district; 14 – Ledce, Brno-venkov district; 15 – Marefy, Vyškov district; 16 – Maršovice-Jezeřany, Znojmo district; 17- Moravská Nová Ves - Hrušky, Břeclav district; 18 – Oslavany, Brno-venkov district; 19 – Ostopovice, Brno-venkov district; 20 – Pavlov, Břeclav district; 21 – Přerov-Předmostí, Přerov district; 22 – Smolín, Břeclav district; 23 – Šlapanice, Brno-venkov district; 24 – Záhlinice, Kroměříž district.

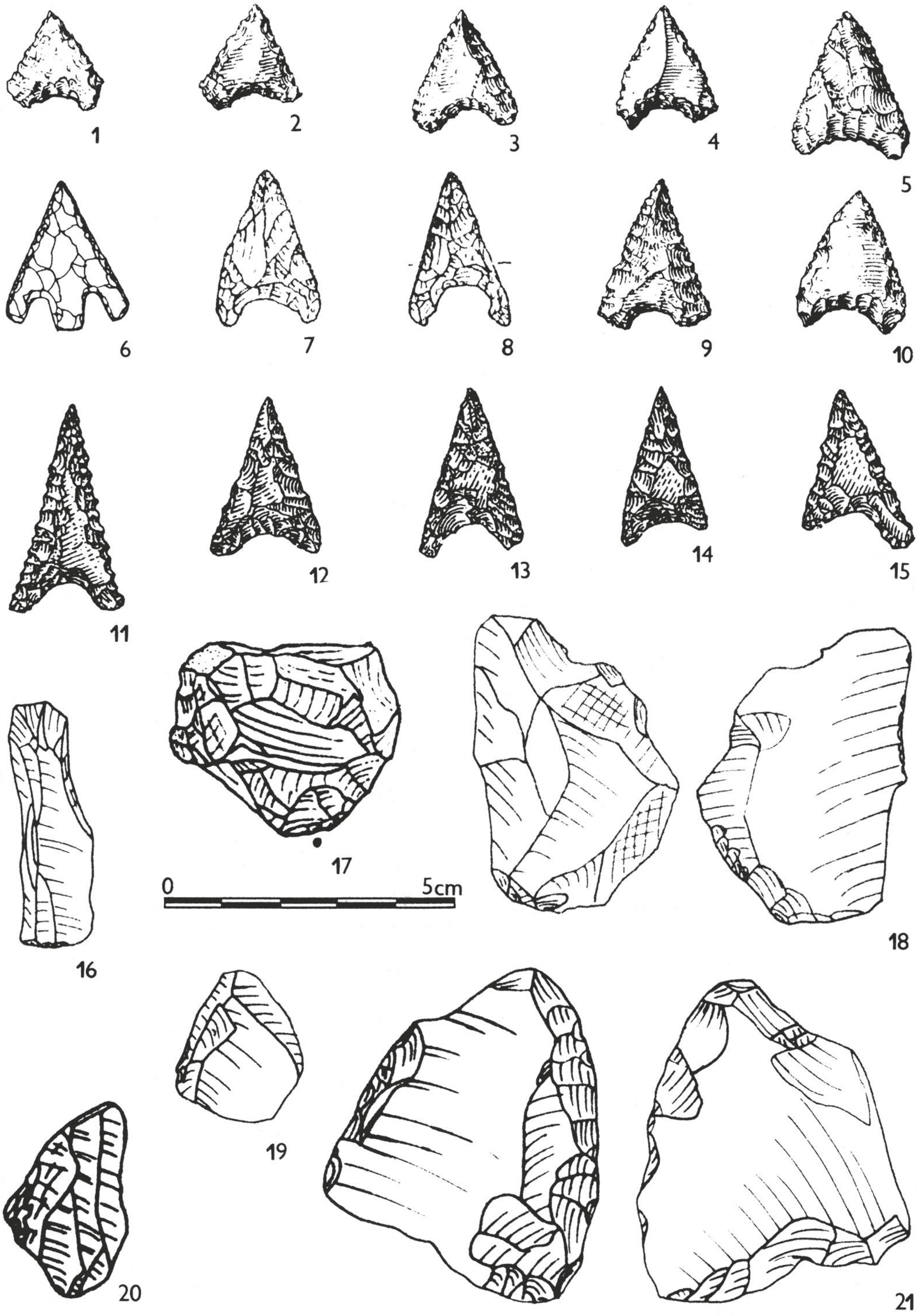
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Fig. 2. Chipped stone material of MBBC: 1-4, 9, 10 – Ledce, grave 2/52; 5 – Ledce, grave 1/52; 6 – Borkovany, grave 1/52; 7-8 – Brno-Holásky, grave 1/59; 11-15 Moravská Nová Ves – Hrušky, grave 33/91; 16, 18 – Oslavany, grave 1/1955; 17 – Brno-Holásky, grave 33/38; 19 – Kuřim; 20-21 – Brno-Řečkovice.

part, in comparison with unpublished, very rich material from settlement sites (e.g. from Bořitov, Blansko district, or Brno-Obřany, Brno-město district).

The chipped stone material has been discovered on 24 sites of the Moravian Bell Beaker culture – cemeteries and single graves (Fig. 1). It has been recovered from 64 graves.

1. BLAŽOVICE, Brno-venkov district
   Site II: brick yard of Č. Walter.
   Excavations: P. Nakládal 1912-14, T. Ondráček 1920s and 1931, A. Procházka 1920-24, 1926, 1931 and 1933, I. L. Červinka 1925, J. Poulík 1933; cemetery.
   Chronology: FG III.
   Grave 17/33: 1. Arrowhead, raw material: ? (artifact missing).
   Grave 18/33: 1-2. Two arrowheads, raw material: ? (artifacts missing).
   Grave 19/33: 1-2. Two arrowheads, raw material: ? (artifacts missing).
   Collection: Moravian Museum Brno (abb. MZM Brno).
   Literature: Dvořák 1992, 22.
2. BORKOVANY, Břeclav district
   Site I: „Čtvrtě od Klobouk".
   Excavations: J. Ondráček 1959; 2 graves.
   Chronology: FG I.
   Grave 1/59: 1. Arrowhead with a short stem, length 25 mm, raw material: ?, inv. no.: ? (Fig. 2:6).
   Collection: Regional Museum Mikulov (abb. RM Mikulov)
   Literature: Dvořák et al. 1996, 8-9, Taf. 1A.
3. BRNO-ČERNÁ POLE, Brno-město district)
   Site I: „Kunze Gasee".
   Excavations: H. Štik 1929; 1 grave.
   Chronology: ?
   Grave 1/38: 1. Flake, raw material: ? (artifact missing).
   Literature: Dvořák 1992, 8, Taf. 5A.
4. BRNO-HOLÁSKY, Brno-město district
   Site: sand pit (lot no. 183/2-2021/1).
   Excavations: J. Simon 1900-1902, 1936-1939, M. Chleborád 1934-40, F. Pařízek 1947-49, S. Zacherle 1956; settlement features, 72 graves.
   Chronology: FG III.
   Grave 5/37: 1. Point made from an oblong flake, raw material: ?, inv. no. Pa 6835/38 (artifact missing). 2. Pebble stone, raw material: ?; inv. no. Pa 6837/38.
   Grave 10/38: 1. Trapeze (truncated blade) with two oblique truncations, glossy polish, length 31 mm, raw material: Moravian Jurassic flint, inv. no. Pa 16353.
   Grave 13/38: 1. Arrowhead with rectangular notch at the base, damaged, length 28 mm, raw material: silex (burnt), inv. no. Pa 16359.
   Grave 14/38: 1. Flake, length. 37 mm, raw material: ?, inv. no. Pa 16365.
   Grave 17/38: 1. Arrowhead, raw material: ? (artifact missing).
   Grave 24/38: 1. Pebble stone, raw material: ?, inv. no. Pa 16384.
   Grave 31/38: 1. Truncated blade with slightly oblique truncation in the basal part, length 43 mm, raw material: Moravian Jurassic chert, gray, inv. no. Pa 16400.
   Grave 35/38: 1. Heart-like arrowhead with concave base, length 28 mm, raw material: silex from glacial segments; inv. no. Pa 160410 (Fig. 2:7). 2. Triangular, heart-like arrowhead with semi-circular notch at the base, length 26 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. Pa 160411 (Fig. 2:8).
   Grave 38/38: 1. Retouched flake, length 34 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. Pa 16418 (Fig. 2:17).
   Grave 46/38: 1. Flake with polyhedral striking platform, length 29 mm, raw material: Moravian Jurassic chert, inv. no. Pa 16429.
   Grave 47/38: 1. Truncated blade with oblique truncation in the distal part, length 32 mm, raw material: Moravian Jurassic chert (?), inv. no. Pa 16431.
   Grave 56/38: 1. Blade endscraper, length. 31 mm, raw material: silex (burnt); inv. no. Pa 16446.
   Grave 64/40: 1. Truncated blade with a rounded truncation in the distal part, length 32 mm, raw material: Moravian Jurassic chert, inv. no. Pa 16460.
   Grave 68/40: 1. Heart-shape arrowhead, length 28 mm, raw material: ?, inv. no. Pa 16470 (artifact missing). 2. Flake, length 44 mm, raw material: ?, inv. no. Pa 16471 (artifact missing).
   Collection: MZM Brno.
   Literature: Dvořák 1992, 10-16, Taf. 12A, 13D, 14C, D, 19A, 21A, B, 23B, C, H; 24C, 27E.
5. BRNO-ŘEČKOVICE, Brno-město district)
   Site II: „u Krbála".
   Excavations: 1934; 1 grób.
   Chronology: ?
   Grave 1/34: 1. Sidescraper partially retouched on both sides, made from flake, length 55 mm, raw material: silex from glacial sediments, inv. no. Pa 118/35 (Fig. 2:21). 2. Splintered piece, length 35 mm, raw material: Moravian Jurassic chert, inv. no. Pa 118/34 (Fig. 2:20). 3. Pebble stone, raw material: ? (artifact missing).
   Collection: MZM Brno.
   Literature: Dvořák 1992, 18, Taf. 6B.
6. BRNO-ŽIDENICE, Brno-město district
   Site I: „Grefki" and sandpit.
   Excavations: K. J. Maška 1890, F. Černý 1901, M. Chleborád and E Kolibabe 1932, B. Vyskočil 1941, J. Poulík 1945, J. Ondráček 1963, I. Peškař 1967; at least 16 graves.
   Chronology: FG III.
   Grave 7/32: 1-3. Three flakes, raw material: ? (artifacts missing).
   Grave 10/32: 1. Bifacially retouched tool (segment) made from a rock chunk, length 45 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. Pa 4032/38.
   Collection: MZM Brno.
   Literature: Dvořák 1992, 19, Taf. 32C.
7. DIVÁKY, Břeclav district
   Site II: „Nedánov".
   Excavations: J. Němeček 1981; 1 grave (?).
   Chronology: ?
   1. Arrowhead, length 21 mm, raw material: Moravian Jurassic chert.
   Collection: RM Mikulov.
   Literature: Dvořák et al. 1996, 16, Taf. 9B.
8. DOLNÍ VĚSTONICE, Břeclav district
   Site II: „Zadní písky".
   Excavations: B. Klíma 1949; 2 graves.
   Chronology: FG II.
   Grave 1/1949: 1. Blade, length 34 mm, raw material: ?, inv. no. ? 2. Blade, length 35 mm; raw material: ?, inv. no. ?
   Grave 2/1949: 1. Heart-shape arrowhead, raw material: ?, inv.

no/ 166/49.
Collection: RM Mikulov.
Literature: DVOŘÁK ET AL. 1996, 16, 17, Taf. 16B.
Site III: „Štěrkovna".
Excavations J. Ondráček, Z. Měřínský, I. Rakovský, J. Peška, P. Dvořák 1976-78 and 1987; 18 graves.
Chronology: I/II (Graves 330/77; 333/77); II (Grave 303/77); undetermined – Grave 338/77.
Grave 303/77: 1. Silex artifact, raw material: Moravian Jurassic chert, inv. no. 03033/1-22028/77.
Grave 330/77: 1. Endscraper made from blade, with cortex surface, raw material: silex from glacial sediments, inv. no. 03033/1-22028/77 (Fig. 3:13).
Grave 333/77: 1. Flake with utilization retouch (?), length 3 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 03033/1-2215/77 (Fig. 3:12).
Grave 338/77: 1. Small flakes, partially retouched, raw material: chert of the Krumlovský les type (variant II), inv. no. 03033/12237/77 (Fig. 3:10). 2. Flake with cortex surface, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 03033/12238/77 (Fig. 3:11).
Collection: RM Mikulov
Literature: DVOŘÁK ET AL. 1996, 17-20, Taf. 22B, 23, 26A.

9. HOLEŠOV, Kroměříž district
Site: „Zdražilovsko".
Excavations: B. Struhala 1950; J. Ondráček 1964-1970.
Chronology: FG II
Grave II: 1. Retouched flake, length 42 mm; raw material: ?, inv. no. 276-216/66 (Fig. 4:13). 2. Flake, length 33 mm; raw material: ?, inv. no. 276-218/66 (Fig. 4:12). 3. Flake, length 29 mm, raw material: inv. no. 276-219/66 (Fig. 4:2). 4. Flake with cortex fragment, length 29 mm, raw material: ?, inv. no. 276-220/66 (Fig. 4:10). 5. Flake, length 3 mm, raw material: ?, inv. no. 276-221/66 (Fig. 4:9). 6. Flake, length 26 mm, raw material: ?, inv. no. 276-222/66 (Fig. 4:1).
Grave III: 1. Flake, length 36 mm; raw material: ?, inv. no. 276-228/66 (Fig. 4:11). 2. Flake, length 27 mm, inv. no. 276—229/66 (Fig. 4:5).
Grave VI: 1. Heart-like arrowhead with trapezoid notch at the base, length 18.5 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-122/68 (Fig. 4:4).
Grave VII: 1. Blade, length 58 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-125/68 (Fig. 4:8). 2. Flake with utilization traces, length 16 mm; raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-126/68 (Fig. 4:6). 3. Flake fragment with two notches on one edge, length 25.5 mm, raw material: silex from glacial sediments, inv. no. 276-127/68 (Fig. 4:3). 4. Flake, length 15 mm, raw material: silex from glacial sediments, inv. no. 276-128/68 (Fig. 4:7).
Grave X: 1. Bifacially retouched small point, with rounded base and denticulated sides, length 35 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-20/70 (Fig. 5:10). 2. Heath-like arrowhead with rectangular notch at the base, length 26 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-26/70 (Fig. 5:13). 3. Heath-like with trapezoid notch at the base, length 26 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-27/70 (Fig. 5:12). 4. Arrowhead, length 25 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-28/70. 5. Heath-like with rectangular notch at the base, length 23 mm, raw material: silex from glacial sediments (?), inv. no. 276-29/70 (Fig. 5:4). 6. Triangular arrowhead with rectangular notch at the base, length 20 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-30/70 (Fig. 5:2). 7. Arrowhead part with irregular, trapezoid notch at the base, length 13 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-31/70 (Fig. 5:8). 8. Triangular arrowhead with rectangular notch at the base, with one „wing" missing, length 29 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-33/70 (Fig. 5:5). 9. Triangular arrowhead with rectangular notch at the base, length 28 mm, raw material: silex of unspecified type, inv. no. 276-38/70 (Fig. 5:7). 10. Triangular arrowhead with trapezoid notch at the base, length 27 mm; raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-42/70 (Fig. 5:6). 11. Massive blade, length 31 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no.276-21/70 (Fig. 5:9). 12. Flake, length 26 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-22/70 (Fig. 5:16). 13. Partially retouched blade-like chip, length 26 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-23/70 (Fig. 5:1). 14. Retouched flake, length 22 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-24/70 (Fig. 5:3). 15. Partially retouched blade-like chip, length 23 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-25/70 (Fig. 5:11). 16. Small, bifacially retouched point with rounded base, length 21 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-32/70 (Fig. 5:14). 17. Retouched flake with chisel-like edge formed on the ventral side, length 20 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-34/70 (Fig. 5:15). 18. Blade with irregular lateral retouch and distal part formed as a massive borer, length 56 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 276-41/70 (Fig. 5:17).
Collection: Museum of the Kroměříž Region, Kroměříž.
Literature: ONDRÁČEK / ŠEBELA 1985, 80-84, tab. 40-43, 45-46.

10. JIŘÍKOVICE, Brno-venkov district
Site: „Rohlenka" Shopping Center near Brno.
Chronology: A. Matějíčková 1998, 1 grave.
Chronology: FG I/II.
Grave 1: 1. Arrowhead, length 20 mm, raw material: ?, no inv. no.?
Collection: Ústav archeologické památkové péče (Department for Protection of Archaeological Heritage), Brno.
Literature: MATĚJÍČKOVÁ 2001, 352, obr. 2:2.

11. KLOBOUKY, Břeclav district
Side IV: „Padělky u morkůveckého kříře".
Excavations: V. and D. Samec, F. Špaček, J. Ondráček, J. Kozel 1920, 1925, 1935, 1964, 1966, 1977; 4 graves.
Chronology: ?
Grave 2/66: 1. Silex artifact, inv. no. 418-6/67 (artifact missing).
Collection: Městské muzeum, Klobouky u Brna (City Museum of Klobouky near Brno)
Literature: DVOŘÁK ET AL. 1996, 25, Taf. 33C.

12. KOBYLNICE , Brno-venkov district
Site I: „Za ovčírnou".
Excavations: J. Vašíček, A. Procházka 1926-1928, 28 graves.
Chronology: FG II.
Grave 22/27: 1. Arrowhead, length 31 mm; raw material: ?, inv. no. 66359. 2. Arrowhead, length 31 mm; raw material: ?, inv. no. 66360. 3. Arrowhead, length 30 mm; raw mate-

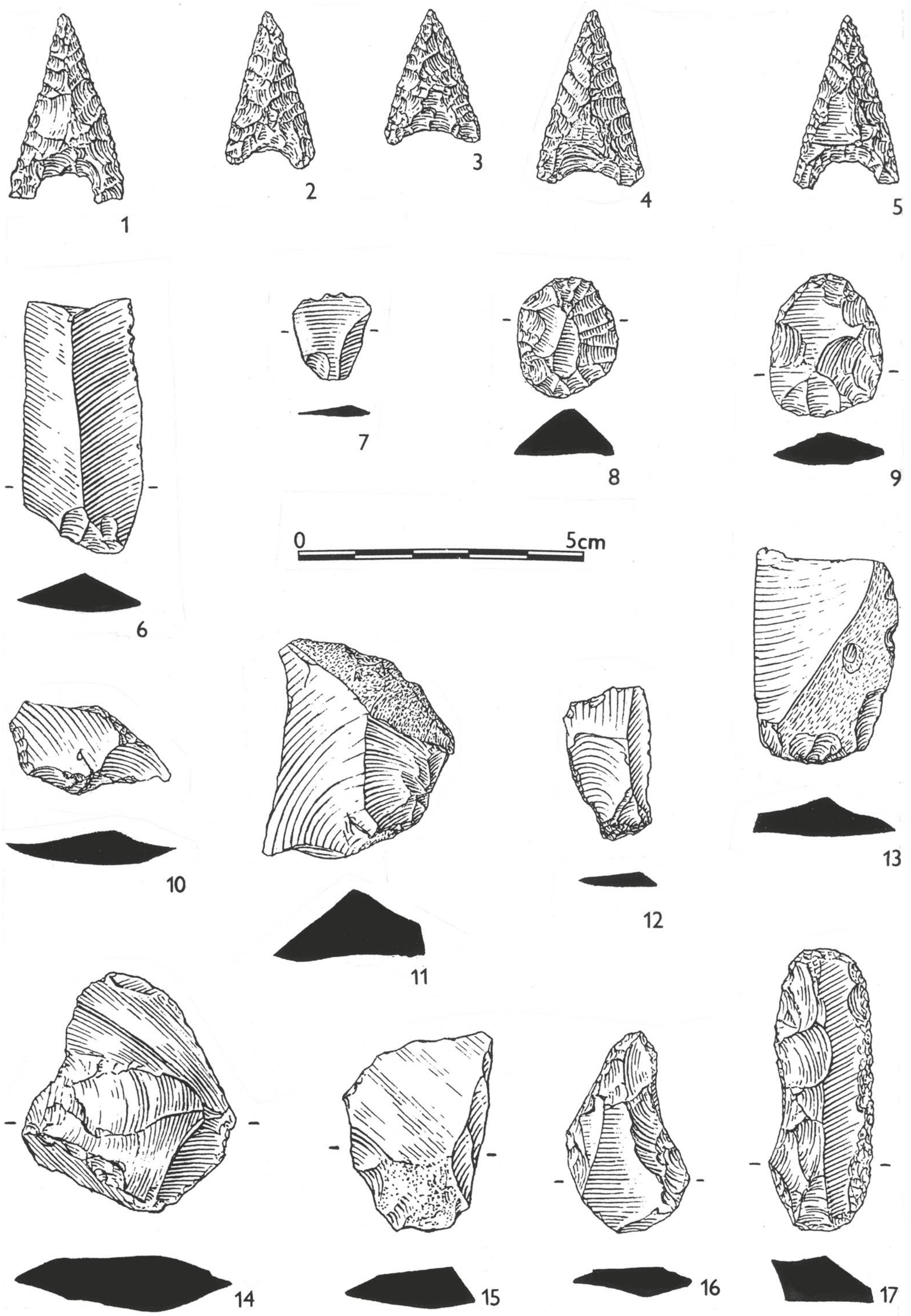

Fig. 3. Chipped stone material of MBBC: 1-3, 6 – Pavlov, grave 519/83; 4, 5 – Pavlov, grave 502/83; 7 – Pavlov, grave 570/84; 8 – Pavlov, grave 512/83; 9 – Pavlov, grave 573/84; 10, 11 – Dolní Věstonice, grave 338/77; 12 – Dolní Věstonice, grave 333/77; 13 – Dolní Věstonice, grave 330/77; 14 – Pavlov, grave 524/83; 15 – Pavlov, grave 585/84; 16 – Pavlov, grave 570/84; 17 – Pavlov, grave 593/84.

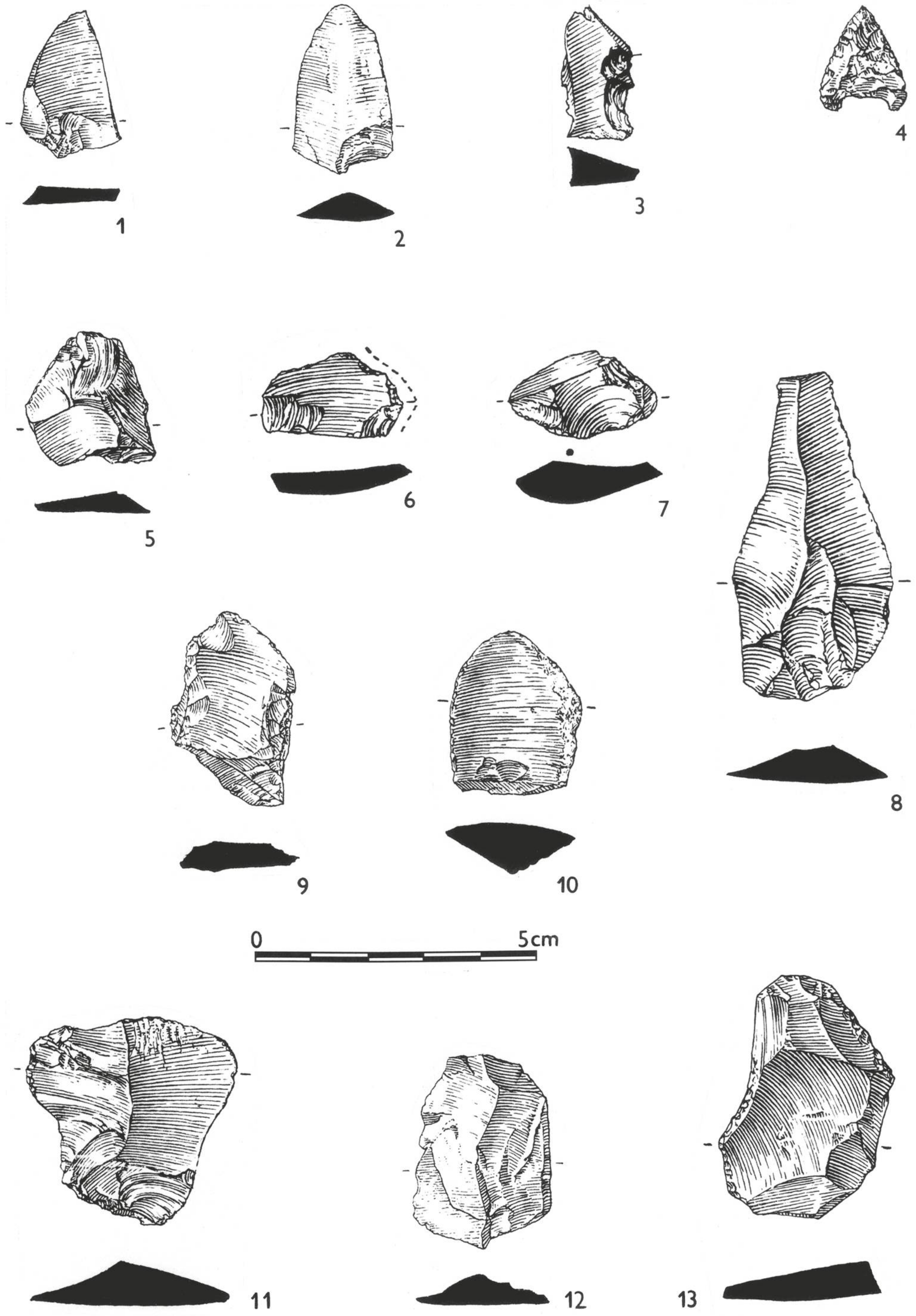
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Fig. 4. Chipped stone material of MBBC from Holešov: 1, 2, 9, 10, 12, 13 – grave II; 3, 6, 7 – grave VII; 4 – grave VI; 5,11 – grave III.

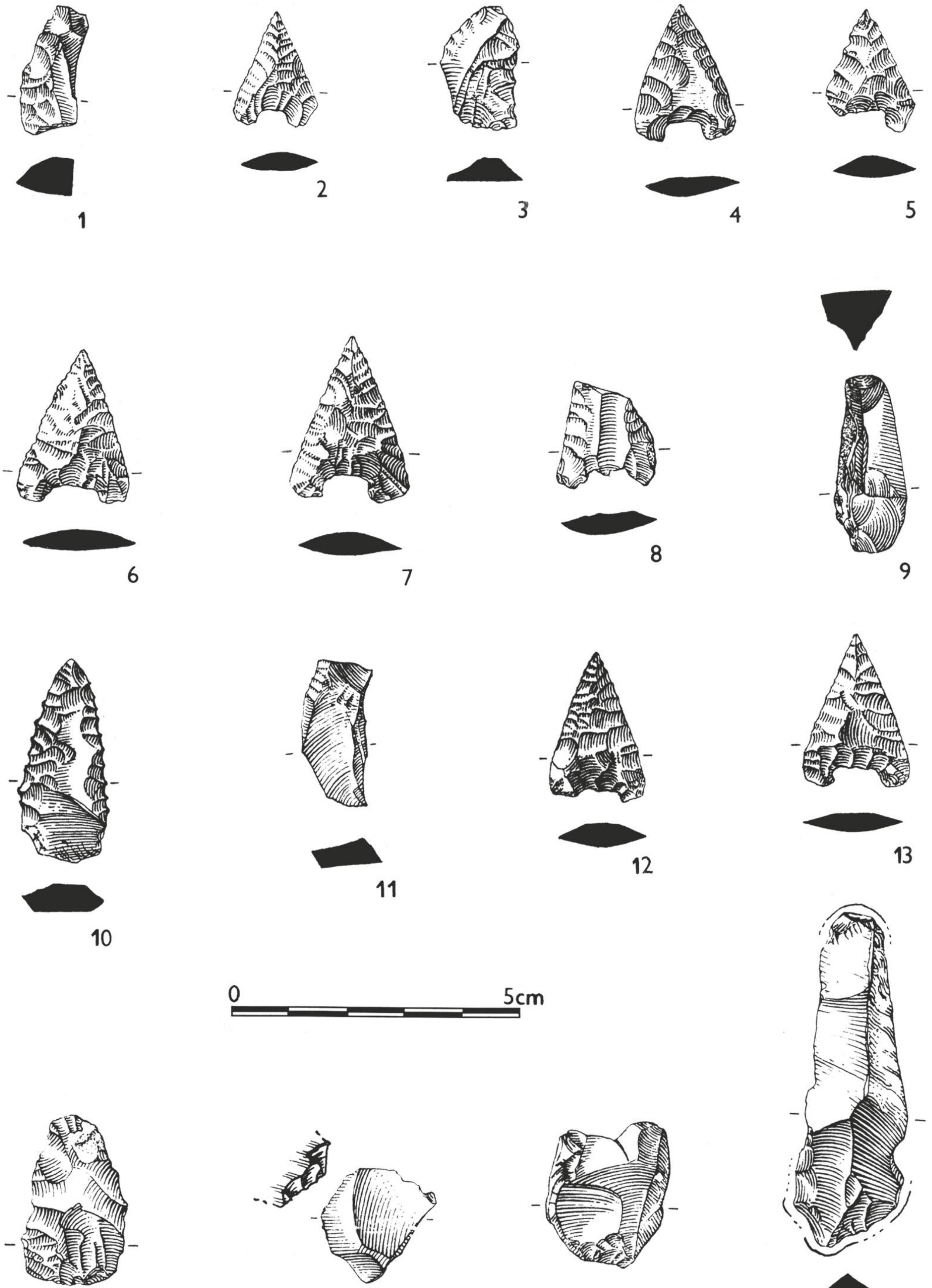
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Fig. 5. Chipped stone material of MBBC from Holešov: 1-17 – grave X.

rial: ?, inv. no. 66361.
Collection: MZM Brno.
Literature: Dvořák 1992, 27, Taf. 51-C.

13. KUŘIM, Brno-venkov district
Site I: „východně od obce; pod kopcem velký červený vrch".
Excavations: 1938; 7 graves.
Chronology: ?
Grave 4/38: 1. Flake, length 26 mm, raw material: chert of the Krumlovský les type (variant II) (?), inv. no. Pa 10014/39-5 (Fig. 2:19).
Collection: MZM Brno.
Literature: Dvořák 1992, 28, Taf. 54C.

14. LEDCE, Brno-venkov district
Site I: Krčál's sand pit, lot no. 79/5.
Excavations: J. Poulík 1936-1937; at least 5 graves.
Chronology: FG II.
Destroyed graves: 1-2. Two flakes (artifacts not identified).
Collection: MZM Brno.
Literature: Dvořák 1992, 29.
Site II: „Předni hony".
Excavations: A. Medunová-Benešová 1952; 2 graves.
Chronology: FG I/II.
Grave 1/52: 1. Triangular arrowhead with concave base, length 25 mm; raw material: Jurassic flint from Cracow-Częstochowa Upland or silex from glacial sediments, inv. no. 9618 /SAÚ 5/52-5 (Fig. 2:5).
Grave 2/52: 1. Triangular arrowhead with concave base, length 17 mm, raw material: silex from glacial sediments, inv. no. 96320/SAÚ 5/52-5a (Fig. 2:1). 2. Triangular arrowhead with concave base, length 17 mm, raw material: silex from glacial sediments, inv. no. SAÚ 6/52-5b (Fig. 2:2). 3. Triangular arrowhead with concave base, length 20 mm, raw material: silex from glacial or Jurassic flint from Cracow-Częstochowa Upland, inv. no. SAÚ 6/52-5c (Fig. 2:4). 4. Triangular arrowhead with concave base, length 20 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. SAÚ 6/52-5d (Fig. 2:3). 5. Triangular arrowhead with concave base, length 25 mm, raw material: silex from glacial sediments or Jurassic flint from Cracow-Częstochowa Upland, inv. no. SAÚ 6/52-5e (Fig. 2:10). 6. Triangular arrowhead with concave base, length 25 mm, raw material: silex from glacial sediments or Jurassic flint from Cracow-Częstochowa Upland, inv. no. SAÚ 6/52-5f (Fig. 2:9). 7. Flake, length 35 mm, raw material: ?, inv. no. SAÚ 6/52-3a. 8. Flake, length 36 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. SAÚ6/52-3b. 9. Flake, length 35 mm, raw material: ?, inv. no. SAÚ 6/52-3c. 10. Flake, length 31 mm, raw material: ?, inv. no. SAÚ 6/52-3d.
Collection: Okresní muzeum Brno-venkov, Ivančice (Brno-venkov District Museum, Ivančice).
Literature: Dvořák 1992, 29, 30, Taf. 58A, 59A.

15. MAREFY, Vyškov district
Site: Člupy.
Excavations: F. Kalousek, A. Procházka (1927); 6 graves.
Chronology: FG III.
Grave XXI: 1. Point with two stems at the base, length 50 mm, raw material: silex from glacial sediments, inv. no. 66313b (Fig. 6:10). 2. Trapezoid with bifacial (bilateral), partly flat retouch, length 47 mm, raw material: silex from glacial sediments, inv. no. 66309 (Fig. 6:7). 3. Trapezoid with bifacial, partly flat retouch, length 41 mm, raw material: silex from glacial sediments, inv. no. 66312 (Fig. 6:8). 4. Trapezoid with bifacial, partly flat retouch, length 31 mm, raw material: silex from glacial sediments, inv. no. 66313a (Fig. 6:9). 6. Trapezoid with bifacial, partly flat retouch, length 25 mm, raw material: silex from glacial sediments, inv. no. 66311 (Fig. 6:7). 7. Trapezoid with bifacial, partly flat retouch, length 18 mm; raw material: ?, inv. no. ?, (artifact not identified). 8. Trapezoid with bifacial, partly flat retouch (artifact missing).
Grave XLII: 1. Point with concave notch at the base, length 43 mm, raw material: ?, inv. no. 66358 (artifact not identified (Fig. 6:4). 2. Trapezoid with bifacial, partly flat retouch, length 4 mm, raw material: silex from glacial sediments, inv. no. 66369 (Fig. 6:1). 3. Trapezoid with bifacial, partly flat retouch, length 35 mm, raw material: silex from glacial sediments, inv. no. 66363 (Fig. 6:2). 4. Trapezoid with bifacial, partly flat retouch, length 34 mm, raw material: silex from glacial sediments, inv. no. 66366 (Fig. 6:5). 5. Trapezoid with bifacial, partly flat retouch, length 32 mm, raw material: silex from glacial sediments, inv. no. 66367 (Fig. 6:3). 6. Trapezoid with bifacial, partly flat retouch, length 15 mm, raw material: ?, inv. no. 66364 (artifact not identified).
Collection: MZM Brno.
Literature: Kalousek 1956, 78, 79, 80, 81, obr. 6, tab. I: 2, 3, II-V; Škrdla / Šebela 1997.

16. MARŠOVICE-JEZEŘANY, Znojmo district
Site: „Na kocourkách".
Excavations: I. Rakovský (1977), 1 grave.
Chronology: FG I/II.
Feature 67-68: Grave inventory included 13 arrowheads (1-13), around and beneath the skeleton, 13 other silex artifacts (14-26), and 16 more in the pit fill (27-42). 1. Heart-like arrowhead with concave notch at the base, length 22.5 mm, raw material: silex from glacial sediments, inv. no. 11479/1 (Fig. 7:7). 2. Heart-like arrowhead with concave notch at the base, length 19 mm, raw material: silex from glacial sediments, inv. no. 11479/2 (Fig. 7:3). 3. Heart-like arrowhead with concave notch at the base, length 17 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 11479/3 (Fig. 7:5). 4. Triangular arrowhead with trapezoid notch at the base, length 18 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 11479/4 (Fig. 7:4). 5. Heart-like arrowhead with trapezoid notch at the base, length 21.0 mm, raw material: chert of the Krumlovský les type (variant II/I), inv. no. 11479/5 (Fig. 7:2). 6. Triangular arrowhead with concave notch at the base, length 25.5 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 11479/6 (Fig. 7:8). 7. Heart-like arrowhead with trapezoid notch at the base, length 24.0 mm, raw material: chert of the Krumlovský les type, (variant I), inv. no. 11479/7 (Fig. 7:6). 8. Triangular arrowhead with slightly concave notch at the base, length 21.5 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 11479/8 (Fig. 7:1). 9. Triangular arrowhead with concave notch at the base, length 23.5 mm; raw material: chert of the Krumlovský les type (variant II) inv. no. 11479/9 (Fig. 7:9). 10. Heart-like arrowhead with semi-circular notch at the base, length 24,0 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 11479/10 (Fig. 7:14). 11. Large triangular arrowhead with concave notch at the base, length 32 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 11479/11 (Fig. 7:12). 12. Heart-like arrowhead with concave notch at the base, length 26,5 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 11479/12 (Fig. 7:10). 13. Triangular arrowhead with rectangular notch at the base, length 31.0 mm,

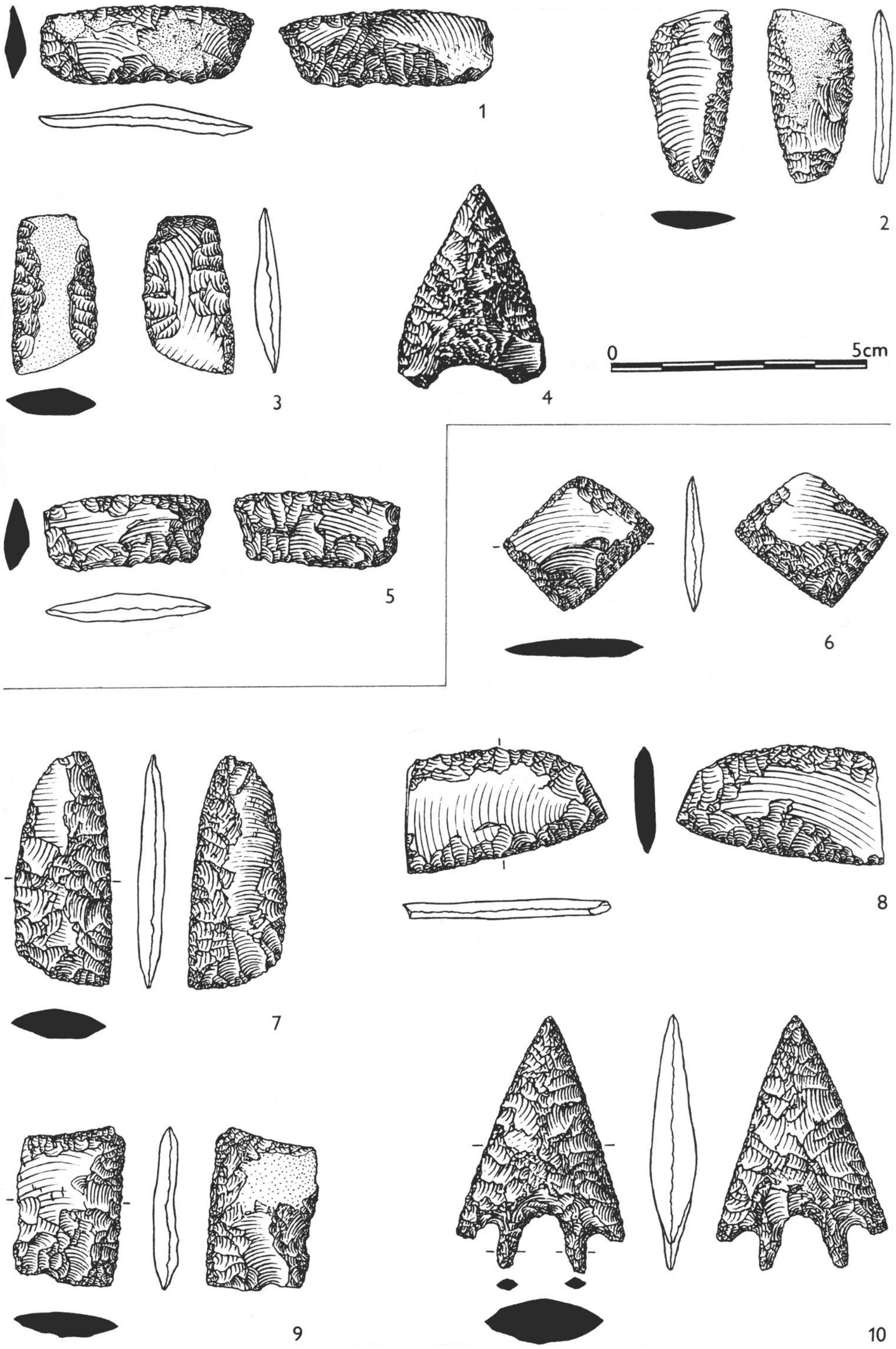
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Fig. 6. Chipped stone material of MBBC: 1-5 Marefy, grave XLII, 6-10 Marefy, grave XXI.

raw material: silex from glacial sediments, inv. no. 11479/13 (Fig. 7:13). 14. Retouched flake, raw material: chert of the Krumlovský les (variant II), inv. no. 11485/1 (Fig. 7:18). 15. Blade-like flake, raw material: chert of the Krumlovský les (variant I), inv. no. 11485/2 (Fig. 7:17). 16. Blade-like flake (detached from the same core as flake inv. no. 11485/14), raw material: chert of the Krumlovský les (variant I), inv. no. 11485/3 (Fig. 8:12). 17. Flake, raw material chert of the Krunmlovský les type (variant I), inv. no. 11485/4 (Fig. 4:19). 18. Flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/5 (Fig. 8:9). 19. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/6. 20. Flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/7 (Fig. 8:6). 21. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/8 (Fig. 7:16). 22. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/9 (Fig. 7:11). 23. Flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/10 (Fig. 8:3). 24. Flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/11 (Fig. 7:20). 25. Flake with cortex surface, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/12 (Fig. 7:15). 26. Flake, raw material: brown chert, inv. no. 11485/13. 27. Blade, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/14 (Fig. 8:5). 28. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/15. 29. Fan-like flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/16 (Fig. 8:8). 30. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/17 (Fig. 8:11). 31. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/18. 32. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/19 (Fig. 8:10). 33. Flake, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/20 (Fig. 8:4). 34. Small core for flakes, raw material: chert of the Krumlovský les type (variant II), inv. no. 11485/21 (Fig. 8:7). 35. Flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/22. 36. Flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/23. 37. Flake, raw material: chert breccia, inv. no. 11485/24. 38. Small flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/24. 39. Small flake, raw material: chert of the Krumlovský les type (variant I), inv. no. 11485/25. 40. Silex artifact, raw material: ?, inv. no. 11485/26 (artifact not identified). 41. Silex artifact, raw material: ?; inv. no. 11485/27 (artifact not identified). 42. Silex artifact, raw material: ?; inv. no. 11485/28 (artifact not identified).
Collection: Muzeum a galerie, Moravský Krumlov (Museum and Gallery, Moravský Krumlov).
Literature: Langová / Rakovský 1981.

17. MORAVSKÁ NOVÁ VES – HRUŠKY, Břeclav district
Site: „Hrubé díly".
Excavations: J. Stuchlíková, S. Stuchlík 1991, 1992; graves.
Chronology: FG III.
Grave 33/1991: 1. Long, triangular arrowhead with concave base, length 38 mm, chert of the Krumlovský les type (variant I), inv. no. 0929-192/91 (Fig. 2:11). 2. Heart-like arrowhead with concave base, strongly asymmetric, length 31 mm, chert of the Krumlovský les type (variant II), inv. no. 0929-193/91 (Fig. 2:15). 3. Long, triangular arrowhead with concave base, slightly asymmetric, length 29 mm, chert of the Krumlovský les type (variant II), inv. no. 0929-194/91 (Fig. 2:14). 4. Heart-like arrowhead, asymmetric, length 30 mm, chert of the Krumlovský les type (variant II), inv. no. 0929-195/91 (Fig. 2:12). 5. Triangular arrowhead with concave base, length 38 mm, chert of the Krumlovský les type (variant II), inv. no. 0929-196/91 (Fig. 2:13).
Collection: AÚ AV ČR Brno.
Literature: Dvořák et al. 1996, 8, 22, Taf. 29B; Stuchlík / Stuchlíková 1996, 33, obr. 30: 1-6.

18. OSLAVANY, Brno-venkov district
Site I: near pit of V. Nosek.
Excavations: J. Říhovský 1955; 1 grave.
Chronology: ?
Grave 1/55: 1. Flake retouched on the ventral side, similar to sidescraper, length 54 mm, raw material: chert of the Krumlovský les type (variant I), no inv. no. (Fig. 2:18). 2. Blade, length 43 mm, raw material: chert of the Krumlovský les type (variant II), no inv. no. (Fig. 2:16).
Collection: MZM Brno.
Literature: Dvořák 1992, 32, Taf. 62B.

19. OSTOPOVICE, Brno-venkov district
Site I: „Na Branách".
Excavations: V. Onduš 1970; 20 graves.
Chronology: FG II and III (Grave 14/70).
Grave 14/70: 1. Arrowhead, length 27 mm, raw material: ?, inv. no. 7/70. 2. Arrowhead, length 33 mm, raw material: ?, inv. no. 7/70. 3. Arrowhead, length 28 mm, raw material: ?, inv. no. 7/70. 4. Arrowhead, length 28 mm, raw material: ?, inv. no. 7/70. 5. Arrowhead, length 33 mm, raw material: ?, inv. no. 7/70.
Collection: MZM Brno
Literature: Dvořák 1992, 33, Taf. 65-C; Dvořák / Ondruš 1992, 84, 93, obr. 3-C; tab. I: 1, 9-13.

20. PAVLOV, Břeclav district
Site I: „Horní pole" – western part.
Excavations I. Rakovský 1982-1988; 43 graves.
Chronology: FG II.
Grave 502: 1. Triangular arrowhead with slightly concave base, length 32 mm, raw material: chert of the Krumlovský les type (variant I), inv. no. 11839/12-1762/83 (Fig. 3:4). 2. Triangular arrowhead with concave base, length 32 mm, raw material: chert of the Krumlovský les type (variant I), inv. no. 11839/12-1763/83 (Fig. 3:5).
Grave 512/83: 1. Round scraper made from a flake, raw material: silex from glacial sediments, inv. no. 11839/12-1790/83 (Fig. 3:8).
Grave 519/83: 1. Blade, raw material: silex from glacial sediments, inv. no. 11839/12-1814/83 (Fig 3:6). 2. Triangular arrowhead with concave base, length 23 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 11839/12-1815/83 (Fig. 3:2). 3. Triangular arrowhead with slightly concave base, length 28 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 11839/12-1816/83 (Fig. 3:3). 4. Triangular arrowhead with concave base, length 33 mm, chert of the Krumlovský les type (variant II/?/), inv. no. 11839/12-1817/83 (Fig. 3:1).
Grave 524/83: 1. Flake with traces of use, with glossy polish, raw material: silex from glacial sediments, inv. no. 11839/12-1838/83 (Fig. 3:14).
Grave 570/84: 1. Blunt-tipped borer, raw material: silex from glacial sediments, inv. no. 11839/12-3683a/84 (Fig. 3:16). 2. Small flake, raw material: unspecified silex, inv. no. 11839/12-3683b/84 (Fig. 3:7).

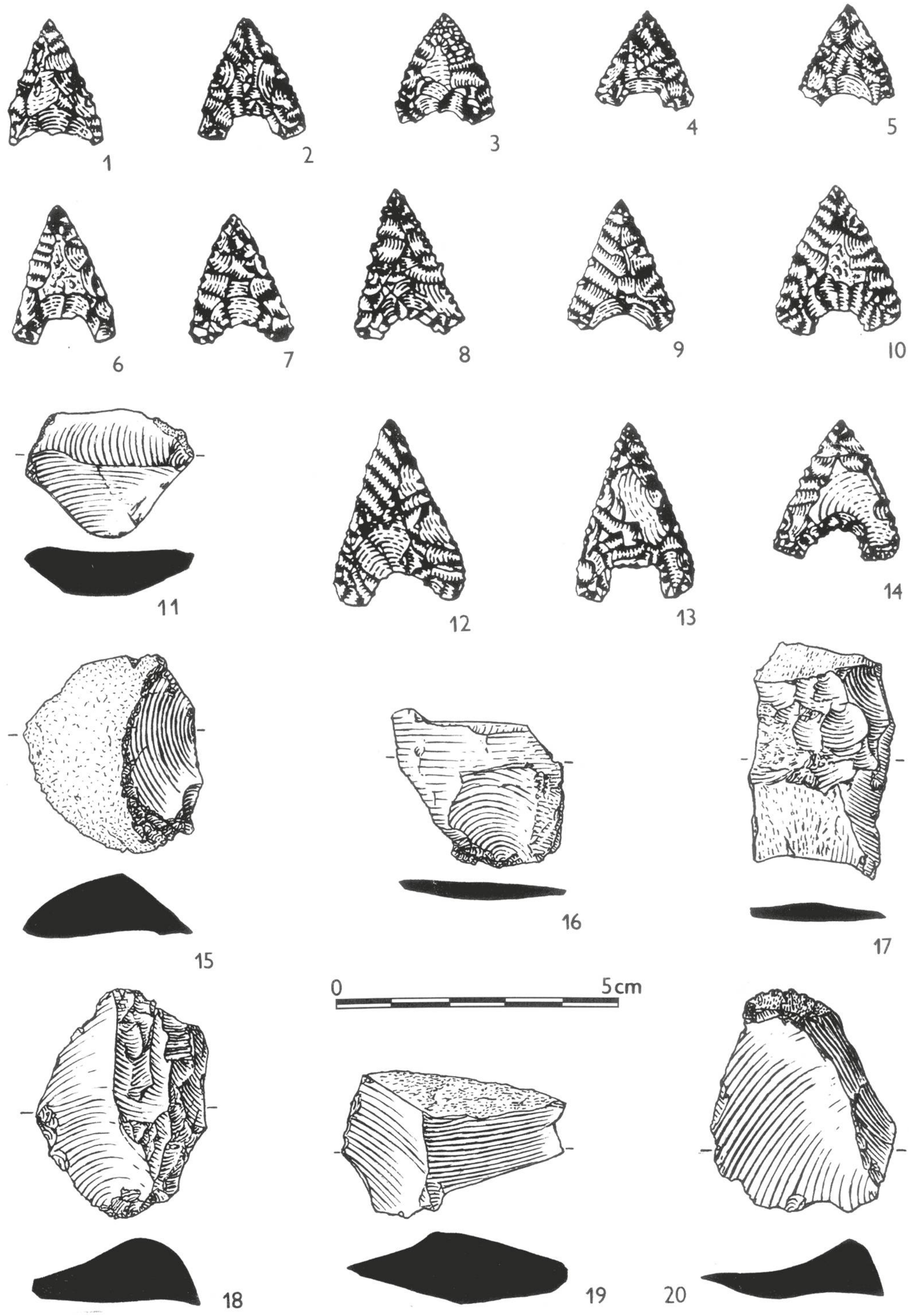
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Fig. 7. Chipped stone material of MBBC: 1-20 – Maršovice-Jezeřany, units 67-68.

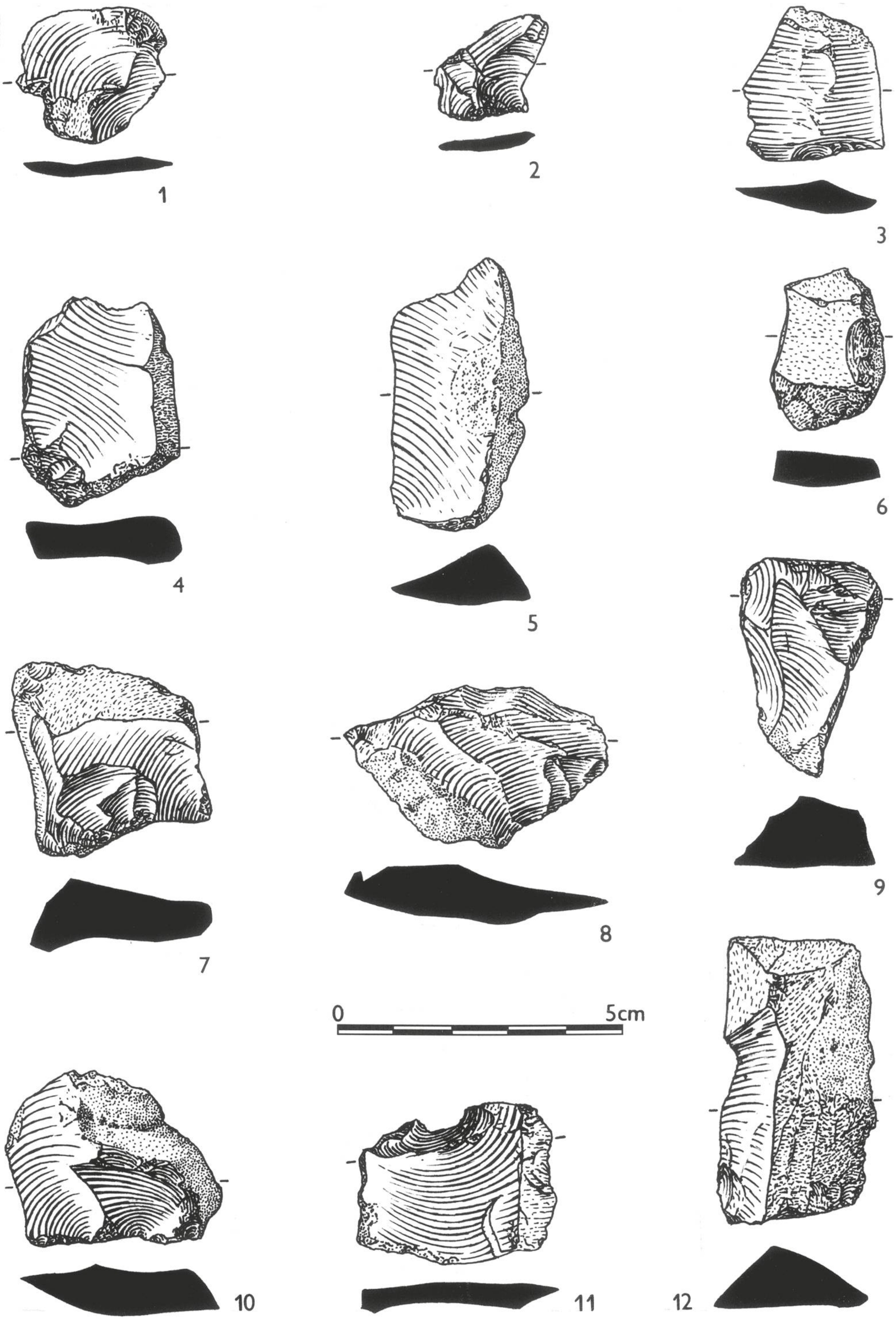
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Fig. 8. Chipped stone material of MBBC: 1-12 – Maršovice-Jezeřany, units 67-68.

Grave 573/84: 1. Oval sidescraper with almost around retouched, raw material: unspecified silex, inv. no. 11839/12-3702/84 (Fig. 3:9).
Grave 585/84: 1. Retouched flake, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 11839/12-3789/84 (Fig. 3:15).
Grave 593/84: 1. Retouched flake with edscraper in the distal end, with blunt back, raw material: burnt silex; inv. no. 11839/12-3835/84 (Fig. 3:17).
Grave 1065/88: 1. Heart-like arrowhead, raw material: ?; inv. no. 11839/12-8150/88.
Collection: AÚ AV ČR Brno

21. PŘEROV-PŘEDMOSTÍ, Přerov district
Site: clay pit of Haná Brick Yard.
Excavations: A. Medunová-Benešová 1957.
Chronology: FG I.
Grave 1: 1. Arrowhead, raw material: unspecified silex, inv. no. 1601/63/4 (Fig. 9:4). 2. Arrowhead, raw material: unspecified silex, inv. no. 1601/63/5 (Fig. 9:3). 3. Arrowhead, raw material: silex from glacial sediments, inv. no. 1601/63/6 (Fig. 9:5). 4. Arrowhead, raw material: silex from glacial sediments (?), inv. no. 1601/63/7 (Fig. 9:1). 5. Arrowhead, raw material: unspecified silex, inv. no. 1601/63/8 (Fig. 9:2). 6. Flake, raw material: silex from glacial sediments, inv. no. 1601/63/28-1 (Fig. 9:11). 7. Flake, raw material: silex from glacial sediments, inv. no. 1601/63/28-2 (Fig. 9:13). 8. Flake, raw material: silex from glacial sediments, inv. no. 1601/63/28-3 (Fig. 9:14). 9. Flake, raw material: silex from glacial sediments, inv. no. 1601/63/28-4 (Fig. 9:9). 10. Flake (?), raw material silex from glacial sediments, inv. no. 1601/63/28-5 (artifact not identified). 11. Flake, raw material: silex from glacial sediments, inv. no. 1601/63/28-6 (Fig. 9:15). 12. Retouched artifact, raw material: silex from glacial sediments, inv. no. 1601/63/28-7 (Fig. 9:10). 13. Flake (?), raw material: silex from glacial sediments, inv. no. 1601/63/28-8 (artifact not identified). 14. Chunk with technical negatives, Moravian Jurassic chert, inv. no. 1601/63/28-9 (Fig. 9:12). 15. Blade, raw material: silex from glacial sediments, inv. no. 1601/63/28-10 (Fig. 9:6). 16. Flake, raw material: silex from glacial sediments, inv. no. 1601/63/28-11 (Fig. 9:8). 17. Flake, raw material: Moravian Jurassic chert, inv. no. 1601/63/28-12 (Fig. 9:7).
Collection: Komenský Museum, Přerov.

22. SMOLÍN, Břeclav district
Site I: „Lochaperky".
Excavations: B. Novotný, J. Dezort 1951-55; 6 graves.
Chronology: FG I/II.
Grave 13/51: 1. Arrowhead, inv. no. 107420. 2. Arrowhead, inv. no. 1087421. 3. Arrowhead, length 21.4 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 107422. 4. Arrowhead, length ?, raw material: ?, inv. no. 107423. 5. Arrowhead, length 24.4 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 107424. 6. Arrowhead, length 22.3 mm, raw material: silex from glacial sediments, inv. no. 107425. 7. Arrowhead, length 25.4 mm, raw material: chert of the Krumlovský les type (variant I), inv. no. 107426. 8. Arrowhead, length 24.7 mm, raw material: chert of the Krumlovský les type (variant I), inv. no. 107427. 9. Arrowhead, length 22.9 mm, raw material: chert of the Krumlovský les type (variant II), inv. no. 107428. Arrowhead, length 22.3 mm, raw material: silex from glacial sediments, inv. no. 107429. 10. Arrowhead, inv. no. ?
Collection: MZM Brno.

23. ŠLAPANICE, Brno-venkov district
Site II: „Široká pole".
Excavations: J. Poulík 1934-1935; A. Dvořáček 1935.
Chronology: FG II.
Grave 4/34: 1. Arrowhead, length 18 mm, gr. 3 mm, inv. no. Pa 140/34-97 (artifact lost).
Grave 5-6/35: 1. Flake, raw material: chert of the Stránská skála type or Jurassic flint from Cracow-Częstochowa Upland, length 52 mm, inv. no. Pa 169/35-101.
Grave 9/35: 1. Artifact, raw material: quartzite, inv. no. Pa 196/35-98 (artifact lost).
Grave 21/35: 1. Flake, chert (?), length 60 mm, inv. no. Pa 169/35-57 (artifact lost)
Collection: MZM Brno
Literature: DVOŘÁK / HÁJEK 1992, 9, 12, 13, 15.
Site IV: „Dolní nad Rybníkem".
Excavations: J. Poulík 1934-1936.
Chronology: FG II.
Grave 4/36: 1. Flake or a distal part of the big blade, with denticulated retouch of one edge, chert of the Krumlovský les type (variant ?), length 52 mm, inv. no. Pa 240/36-14a. Collection: MZM Brno.
Literature: DVOŘÁK / HÁJEK 1990, 19, 20.

24. ZÁHLINICE, Kroměříž district
Site: „U mlýna".
Excavations: I. Rakovský and J. Stuchlíková 1989-1990; 14 graves
Chronology: FG III.
Grave 5/89: 1. Scraper, length 45 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 18977-17/86.
Grave 48/89: 1.Flake, length 28 mm, raw material: silex from glacial sediments, inv. no. 18977-154/89. 2. Flake, length 32 mm, raw material: silex from glacial sediments, inv. no. 18977-155/89.
Grave 67/89: 1. Retouched blade, length 25 mm; raw material: silex from glacial sediments, inv. no. 18977-303/86. 2. Bifacially retouched flake, length 35 mm, raw material: slightly burnt silex from glacial sediments, inv. no. 18977-304/89.
Grave 69/89: 1. Triangular arrowhead, length 18 mm, raw material: Jurassic flint from Cracow-Częstochowa Upland, inv. no. 18977-318/89.
Collection: Museum of the Kroměříž Region, Kroměříž.
Literature: DVOŘÁK / RAKOVSKÝ / STUCHLÍKOVÁ 1992, 216-218, Obr. 5A: 5; 6A: 8, 9; 6B: 5; 8a: 12, 13.

Two hundred and eleven chipped stone artifacts at our disposal fall into four chronological groups:

– FG I – 18 artifacts (Borkovany – 1 artifact, Přerov-Předmostí – 17 artifacts);

– FG I/II – 69 artifacts (Dolní Věstonice III – 5 artifacts, Jiříkovice – 1 artifact, Ledce II – 11 artifacts, Maršovice-Jezeřany – 42 artifacts; Smolín – 10 artifacts);

– FG II – 58 artifacts (Dolní Věstonice II – 3 artifacts, Holešov – 31 artifacts, Kobylnice – 3 artifacts, Ledce I – 2 artifacts, Pavlov – 14 artifacts, Šlapanice II – 4 artifacts; Šlapanice IV – 1);

– FG III – 57 artifacts (Blažovice – 5 artifacts, Brno-Holásky – 18 artifats, Brno-Židenice – 4 artifacts, Marefy – 14 artifacts, Moravská Nová Ves-Hrušky – 5 artifacts, Ostopovice – 5 artifacts, Záhlinice – 6 artifacts);

There are also 9 artifacts from assemblages of undetermined chronology (Brno-Černá Pole – 1 artifact, Brno-Řečkovice – 3 artifacts, Diváky – 1 artifact, Klobouky – 1 artifact, Kuřim – 1 artifact, Oslavany – 2 artifacts).

At present, we would not like to discuss in details technological and typological aspects of the material. We believe that such analyses would be premature until we could compare the grave artifacts with at least exemplary artifacts from the settlement sites. Instead, we would only like to present some exemplary assemblages with a few comments.

FG I is well represented by material from Přerov-Předmostí, Grave 1 (Fig. 9:1-15). Most of artifacts are of silexes (or flint) from glacial sediments, most probably from the southern part of Upper Silesia or the northern approaches of the Moravian Gate, which was the southern limit of the Riss Ice Sheet. Local rocks, namely Moravian Jurassic cherts, have been also recognized. They appear in several places, mainly within western part of Moravia.

The assemblage is distinctive – not surprisingly – by arrowheads of diverse size and shape, including the stemmed one (Fig. 9:3). One artifact has a trapezoid notch at the base. Besides the arrowhead, there is one clear tool in the assemblage – the knife-like tool made of a thick flake (Fig. 9:10). There is also one blade-like form and a series of flakes, mainly irregular, often with cortex surface.

Fig. 7 and 8 depict the assemblage from Jezeřany-Maršovic, Grave 1, classified as FG I/II. The rocks used in this assemblage are more diverse. Generally, there is an even share of glacial silexes, Jurassic flint from Cracow-Częstochowa Upland in Lesser Poland, and local cherts of the Krumlovský les type. Deposits of the latter locate in a small mountain range called Krumlovský les (Krumlov Forest), some 30-40km southwest of the city of Brno.

As we see, the arrowheads (Fig. 7:1-14) are mainly heart-like, but also with trapezoid or square notch. The other pieces here are rather thick flakes. The tip of one of them (Fig. 7:18) shows characteristic impact damage.

As an example of FG II we would like to show the material from Pavlov (Fig. 3:1-9). Rocks recognized in the assemblage are mainly cherts of the Krumlovský Les type, with the presence glacial silexes and Jurassic flint from Cracow-Częstochowa Upland.

There are certainly arrowheads (Fig. 3:1-5,14-17), in this instance rather uniform-heart-like. Interesting are elements of the blade technique, represented by two forms (Fig. 3:6, 17). One of them is a massive retouched blade, with the distal part shaped like an endscraper (Fig. 3: 17). There is also a regular, round endscraper made of flake (Fig. 3:8).

FG II is represented also by the material from Holešov. The locality is well known as the cemetery of the Nitra culture from the Early Bronze Age (Ondráček / Šebela 1985). Moreover, it revealed 5 graves of the Bell Beaker culture that contained 31 chipped stone artifacts (Fig. 4:1-13 and 5:1-7). Most of them are made of Jurassic flint from Cracow-Częstochowa Upland. This rock prevails over glacial silexes, although the latter was available from very close distance – about 50-60km in straight line.

As we can observe, most arrowheads have trapezoid or square notch at the base (Fig. 4:4, 5:2-8,12-13). Two tools look like diminutive bifacial points (Fig. 5:10,14), although they should be probably also classified as arrowheads. Among prevailing flakes, elements of the blade technique are also resented (Fig. 4:8, 5:7).

The youngest stage of the MBBC – FG III is well represented by the spectacular material from Marefy (Fig. 6). L. Šebela et al. will discuss this interesting assemblage in a separate report on Bell Beaker culture segmental daggers in Moravia. At present we would only like to underline, that all the artifacts from the site in question are made of glacial silexes.

Let us get to some general conclusions that that can be draw from this presentation. Possibly the most important one is the observation that stone material of the MBBC represents chipping industry very much different from those recognized as typical for Eneolithic Period (such as of the Baden culture, or the Jevišovice culture; cf. Kopacz 2001; Kopacz / Šebela 2001). It also differs from the material of the Moravian Corded Ware culture, especially from its classic stage (cf. Kopacz / Šebela 1992; 1992a). Instead, it reveals all characteristics of the Early Bronze Age assemblages from the Carpathian zone, e.g. of the Mierzanowice culture in Little Poland, or the Nitra culture in northeastern Moravia and western Slovakia. These units are certainly younger then the Bell Beaker culture, so we can assume that the latter influence the former ones.

Instead, inventories similar to those of the MBBC can be found in the Csepel group in Hungary, and also in the Early Nagyrév culture, which was the successor of the Csepel.

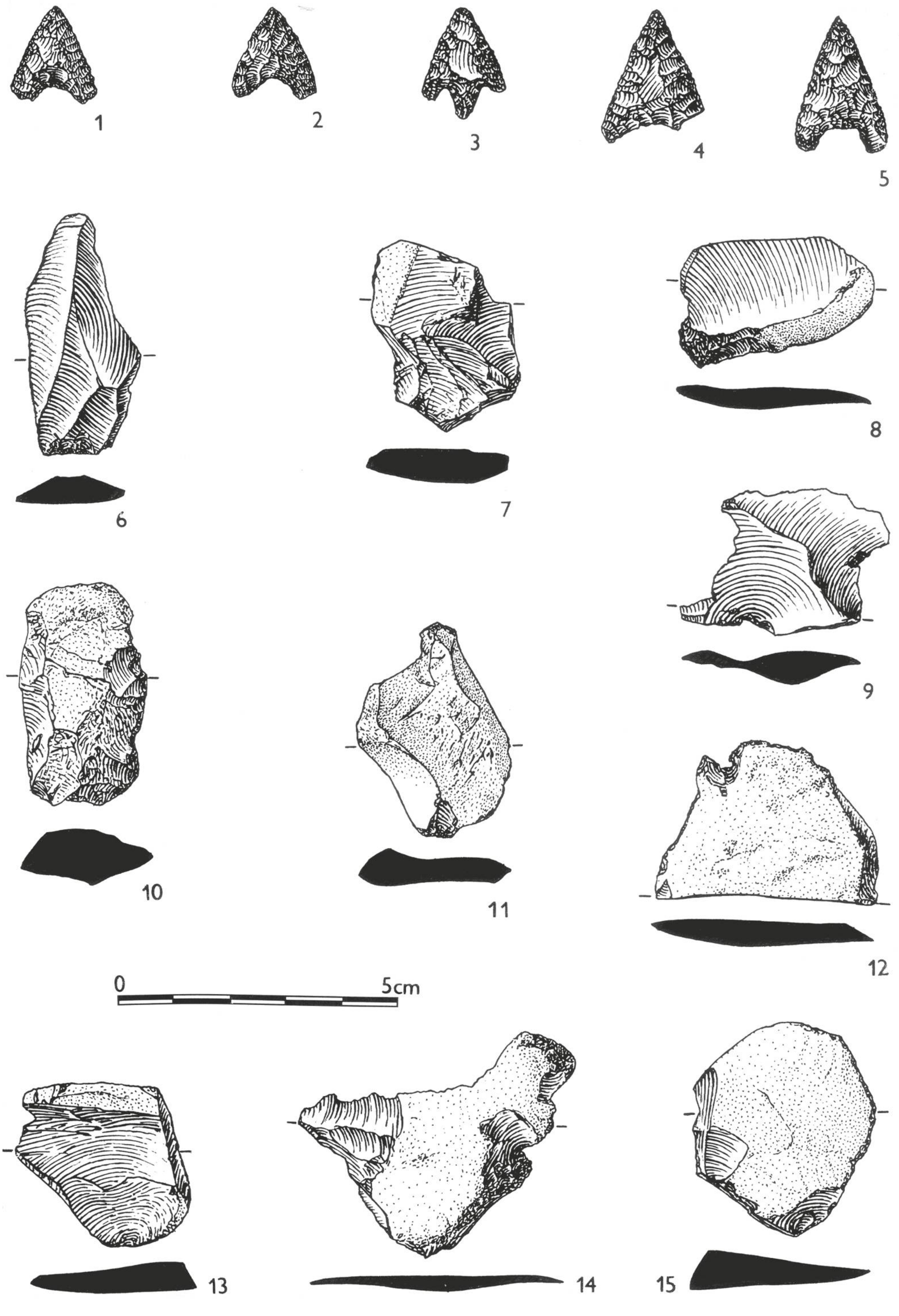
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Fig. 9. Chipped stone material of MBBC: 1-15 – Přerov-Předmostí, grave 1.

Very promising seems to be analyses of stone raw material used by the people the MBBC. According to our observation, the Jurassic flint from distant deposits in Cracow-Częstochowa Upland has been registered mainly in FGII, that in the middle stage of the Moravian Bell Beakers. It seems possible that this rock was „discovered" during the brief incursion the Moravian Bell Beaker people into Little Poland – just during this period. Then the contacts between these two territories were broken. We believe – by the people of a new archaeological unit that emerged about that time in western Little Poland and in Upper Silesia. This unit is known under the name Chłopice-Veselé group or culture. But this question remains outside of the scope of this report.

References

Dvořák P. 1989. Die Glockenbecherkultur in Mähren. In: *Das Äneolithikum und früheste Bronsezeit (C^{14} 3000-2000 b.c.) in Mitteleuropa: kulturelle und chronologische Beziehungen*. Praehistorica XV, 201–205. Praha.

Dvořák P. 1990. Pohřebiště lidu s kulturou se zvoncovitými poháry ve Šlapanicích (okr. Brno-venkov). In: *Pravěké a slovanské osídlení Moravy*, 99–118. Brno.

Dvořák P. 1991. Pohřebiště lidu s kulturou se zvoncovitými poháry v Holáskách (okr. Brno-město). *Časopis Moravského zemského muzea* LXXVI, 41–66.

Dvořák P. 1992. *Die Gräberfelder der Glockenbecherkultur in Mähren (Bez. Blansko, Brno-město, Brno-venkov). Katalog der Funde I.* Brno.

Dvořák P. / Hájek L. 1990. *Die Gräberfelder der Glockenbecherkultur bei Šlapanice (Bez. Brno-venkov). Katalog der Funde*. Brno.

Dvořák P. / Matějíčková A. / Peška J. / Rakovský J. 1996. *Gräberfelder der Glockenbecherkultur in Mähren (Bezirk Břeclav). Katalog der Funde II.* Brno – Olomouc.

Dvořák P. / Ondruš V. 1992. Pohřebiště kultury zvoncovitých pohárů v Ostopovicích. *Časopis Moravského muzea* LXXVII, 81–94.

Kalousek F. 1956. Lid se zvoncovitými poháry na Bučovsku (Morava). *Časopis Moravského muzea* XLI, 53–100.

Kopacz J. 2000. *Początki epoki brązu w strefie karpackiej w świetle materiałów kamiennych.* Kraków

Kopacz J. / Šebela L. 1992. Chipped Stone Industries of the Moravian Corded Ware Culture. *Przegląd Archeologiczny* 39, 67–85.

Kopacz J. / Šebela L. 1992a. Analyse der Spaltindustrie und ihr Beitrag zur chronologischen Gliederung der mährischen Schnurkeramikkultur. In: Buchvaldek M. / Strahm C. (Hrsg.), *Die kontinentaleuropäischen Gruppen der Kultur mit Schnurkeramik*. Praehistorica XIX, 109–116. Praha.

Kopacz J. / Šebela L. 1998. Chipped Stone Material of the Proto-Únětice Culture. *Przegląd Archeologiczny* 46, 37–57.

Kopacz J. / Šebela L. 2000. Moravia at the Turn of Stone Ages in the Light of Stone Material. In: S. Kadrow (ed.), *A Turning of Ages / Im Wandel der Zeiten. Jubilee Book Dedicated to Professor Jan Machnik on His 70th Anniversary*, 313–335. Kraków.

Kopacz J. / Šebela L. 2001. Morawy na przełomie epok kamienia i brązu w świetle materiałów kamiennych. *Pravěk N. R.* 10, 261–285. Brno.

Langová J. / Rakovský I. 1981. Objekty kultury zvoncovitých pohárů z Jezeřan-Maršovic. *Archeologické rozhledy* XXXIII, 19–34, 113–114.

Matějíčková A. 2001. Hrob kultury zvoncovitých pohárů z Jiříkovic, okr. Brno-venkov. *Pravěk-Suplementum* 8, 353–354. Brno.

Ondráček J. / Šebela L. 1985. Pohřebiště nitranské skupiny v Holešově (katalog nálezů). *Studie muzea Kroměřížska* ′85, 2–130.

Stuchlík S. / Stuchlíková J. 1996. Pravěká pohřebiště v Moravské Nové Vsi Hruškách. *Studie AÚ AV ČR* XVI/1. Brno.

Škrdla P. / Šebela L. 1997. Pozdně eneolitické složené dýky na Moravě. *Přehled výzkumů* 1993-1994 (1997), 77–86.

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[1] The research on chipped stone inndustry of the Moravian Bell Beaker culture has been supported by the Grant Agency of Czech Academy of Sciences (No. A 8001202).

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

A Cemetery of the Bell Beaker Culture in Marefy and its Contribution to Studies on the Chipped Stone Industry of the Moravian Late Eneolithic Period*

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I. Introduction

(Cultural specification and outline of the issue)

In the course of collecting sources for study on chipped stone industry of the Moravian Proto-Únětice culture (Kopacz / Šebela 1998) an interesting assemblage of 5 silex artifacts from Marefy (Vyškov district) have been identified in the Moravian Museum, Brno. It included a massive point similar to arrowhead, four trapezoid, bifacially worked-out artifacts and one artifact without retouch.

According to published information related to the find, the assemblage was a part of a burial complex associated – on the basis of pottery – to the Bell Beaker culture. The artifacts in question were found in grave no. XLII, located in Marefy catastral area, in the part called „Člupy" (Fig. 1), where a multi-culture cemetery had been excavated in 1927. Besides the grave named above, five other graves (nos. XXI, XXIX, XXXII, XXXV, and XLI) were assigned to the Bell Beaker culture (Fig. 2). In 1950s the site was introduced to archaeological literature by František Kalousek (Kalousek 1956, 78-81, Tables I-V). It yielded, besides the Bell Beaker culture finds, also 37 burials of the Middle-Danube Urn Field culture, one Corded Ware culture grave (Chleborád 1934, 8-12, Fig. 4, 5; Šebela 1999, 212, 213, Plates 52, 53:1-2), graves of the Únětice culture, and those of the La Tène Period (Kc 1956, 78).

We focus our attention to artifacts representing chipped stone industry. The smallest one is a chip without retouch (Škrdla / Šebela 1997, Fig. 3:4). Much more interesting are the other pieces. They are: the point and four bifacial artifacts resembling narrow blades, described as such by F. Kalousek in his study on the Bell Beaker culture in the Bučovice Region (Kalousek 1956, 78-81). However, a closer examination revealed that the presumable „blades" have nothing in common with the blade technique. They represent a specific type of the silex tool, seldom registered in the Moravian Terminal Eneolithic (cf. Kopacz / Šebela 1992; 1998; Škrdla / Šebela 1997).

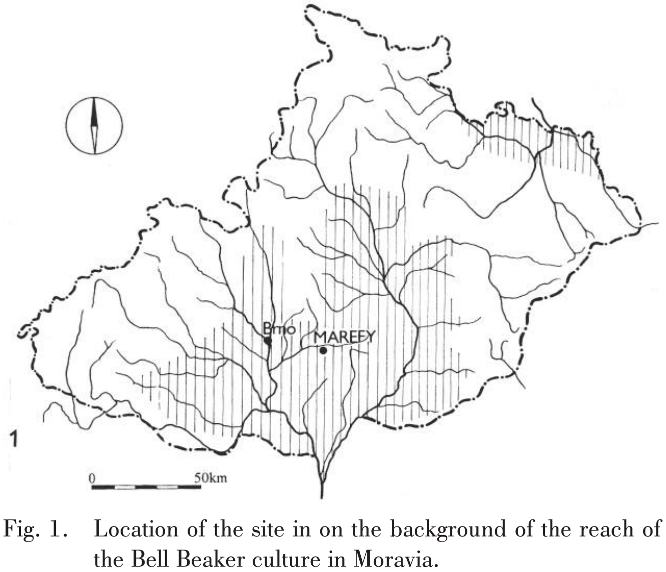

Fig. 1. Location of the site in on the background of the reach of the Bell Beaker culture in Moravia.

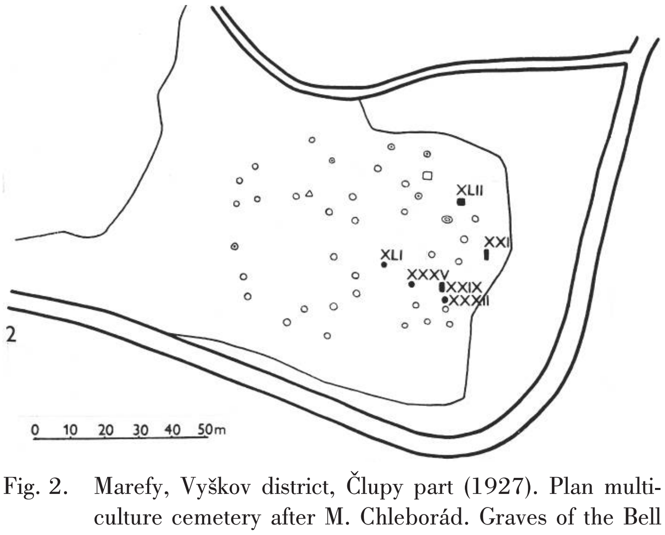

Fig. 2. Marefy, Vyškov district, Člupy part (1927). Plan multi-culture cemetery after M. Chleborád. Graves of the Bell Beaker culture marked black (after Kalousek 1956).

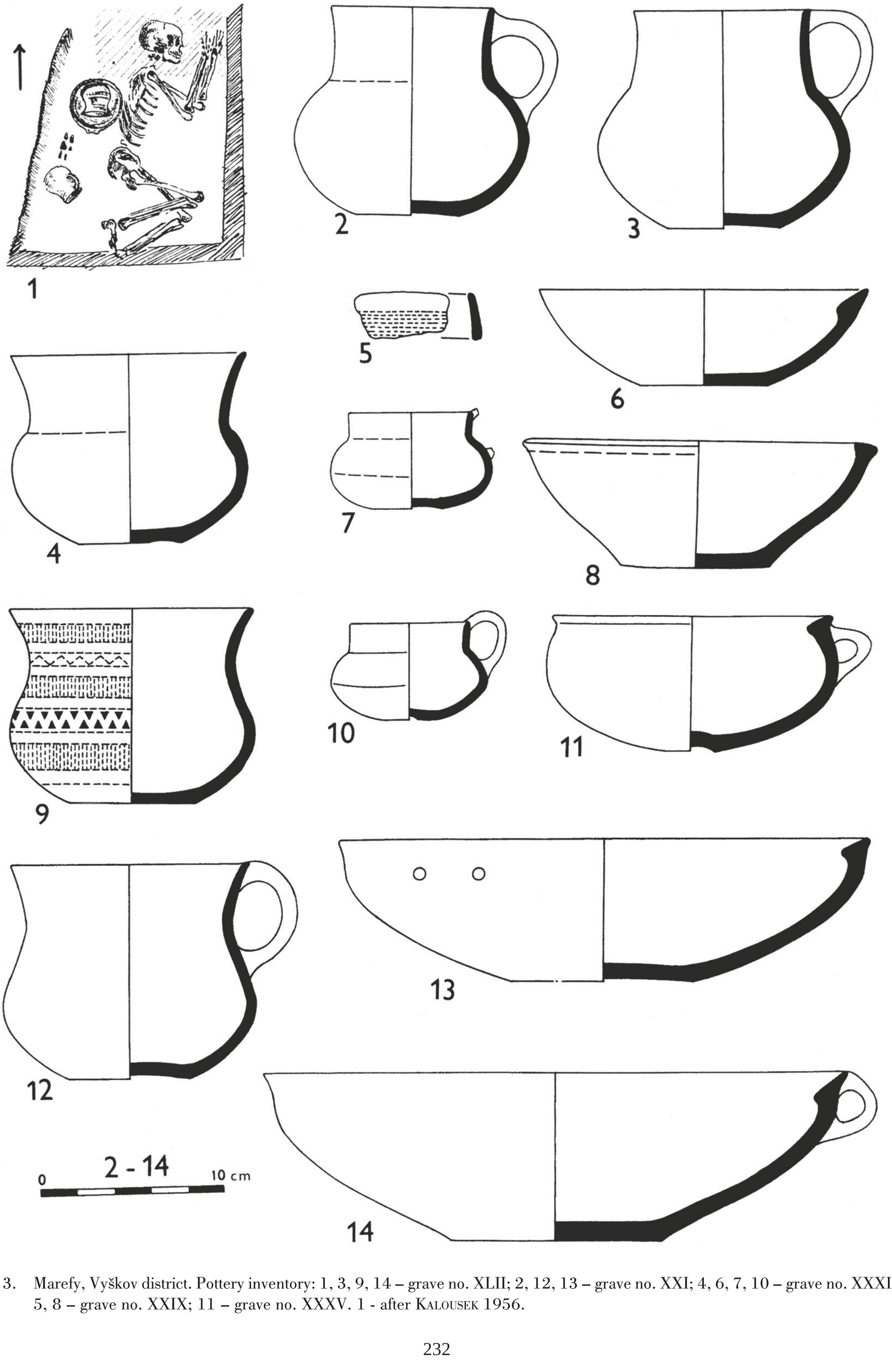
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Fig. 3. Marefy, Vyškov district. Pottery inventory: 1, 3, 9, 14 – grave no. XLII; 2, 12, 13 – grave no. XXI; 4, 6, 7, 10 – grave no. XXXII; 5, 8 – grave no. XXIX; 11 – grave no. XXXV. 1 - after Kalousek 1956.

For correct identification of the artifacts in question we should analyze circumstances of the Marefy find and review it within chronological context of the development of the Bell Beaker culture in Moravia.

II. The grave inventory

Grave XXI

The grave pit, dug into a compact ground, was oval in shape. A part of it was destroyed by another pit. The male skeleton lay on the left side in a crouched position, orientated N-S, facing E. The thigh bones were directed forward with the right angle to the body, while calves were bent back to femurs. Hands were set in front of the face. Behind the dead, by the hips, there were two jars (1, 2) and closer to the legs – a bowl (3). Seven silex artifacts were found beneath the right arm, spread from elbow to the shoulder. They were the point (4), two „blades" (5, 6), two other „blades" trapezoid in shape (7, 8), and two small blades (9, 10). All these pieces showed traces of an organic substance and – according to F. Kalousek (Kalousek 1955, 79) – „probably formed together one point-like artifact".

1. Jar with a band-like handle. Smooth walls brown until black-brown in color, with specked surface. Height – 115 mm. Inv. no. 66334. Fig. 3:12.

2. Jar with a band-like handle. Thick walls brown to grey-brown in color, with specked surface. Height – 110 mm. Inv. no. 66324. Fig. 3:2.

3. Semi-spherical bowl with rim bent outward, with two round holes beneath it. Height – 62-80 mm. Inv. no. 66336. Fig. 3:13.

4. Triangular point with two stems at the base. Length – 50 mm, width – 33 mm, thickness – 9 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66313b. Fig. 4:1; 13:1.

5. Trapezoid with bilateral flat retouch. Length – 47 mm, width – 19 mm, thickness – 6 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66309. Fig. 4:4; 13:2b.

6. Trapezoid with bilateral flat retouch. Length – 41 mm, width – 21-23 mm, thickness – 5 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66312. Fig. 4:2; 13:2a.

7. Trapezoid with bilaterall flat retouch. Length – 31 mm, width – 21 mm, thickness – 5 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66313a. Fig. 4:5; 13:3a.

8. Trapezoid with bilateral flat retouch. Length – 25 mm, width – 20 mm, thickness – 4 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66311. Fig. 4:3; 13:3b.

9. Trapezoid with bilateral flat retouch. Length – 19 mm, width – 17 mm, thickness – ?. Inv. no. ? (not identified). Fig. 13:4a (after Kalousek 1956).

10. Trapezoid with bilateral flat retouch. The artifact lost.

Grave XXIX

In the oval grave pit the child bones lay on the depth of 60 cm (it was not possibly to identify the position and orientation of the body). There were found two completely preserved vessels (1, 2) and sherds of the third one (3).

1. Deformed bowl. Thick walls, brown-red until brown-gray in color. Height – 55-78 mm. Inv. no. 66323. Fig. 3:8.

2. Jar (has disintegrated into pieces)

3. Fragment of an ornamented beaker. Surface brown-red in color. Inv. no. 66362. Fig. 3:5.

Grave XXXII

The grave pit was disturbed by a cremation burial from the Hallstatt Period. A few burnt bones (cremation vestiges) were found on the bottom (ca. 50 cm below the surface), together with a bell-like beaker (1), twou jars (2-3) and a bowl (4).

1. Bell-like beaker without ornament. Black-gray surface with brown speckles. Height – 105 mm. Inv. no. 66325. Fig. 3:4.

2. Jar with a band-like handle stretching above the rim. Smooth walls, brown-gray to black-gray in color. Height – 55 mm. Inv. no. 66329. Fig. 3:10.

3. Jar with a broken band-like handle. Smooth walls, brown to black-gray in color. Height – 55 mm. Inv. no. 66327. Fig. 3:7.

4. Bowl with rim bent inward. Thick walls, brown to black-brown in color. Height – 58 mm. Inv. no. 66326. Fig. 3:6.

Grave XXXV

The grave pit was destroyed by plowing. There survived a bowl (1) and – in a distance of 100-150 cm from it – fragments of two other vessels (2, 3).

1. Bowl with band-like handle. Thick walls, brown-red in color with dark to black speckles. Height – 80 mm. Inv. no. 66328. Fig. 3:11.

2. Sherds of a beaker-like vessel with a gently-profiled neck. Walls brick-red in color. Inv. no. ?

3. Sherds of vessel of unknown shape. Inv. no. ?

Grave XLI

On the bottom of the oval grave pit (160 cm in diameter) lay poorly preserved skeleton in the crouched

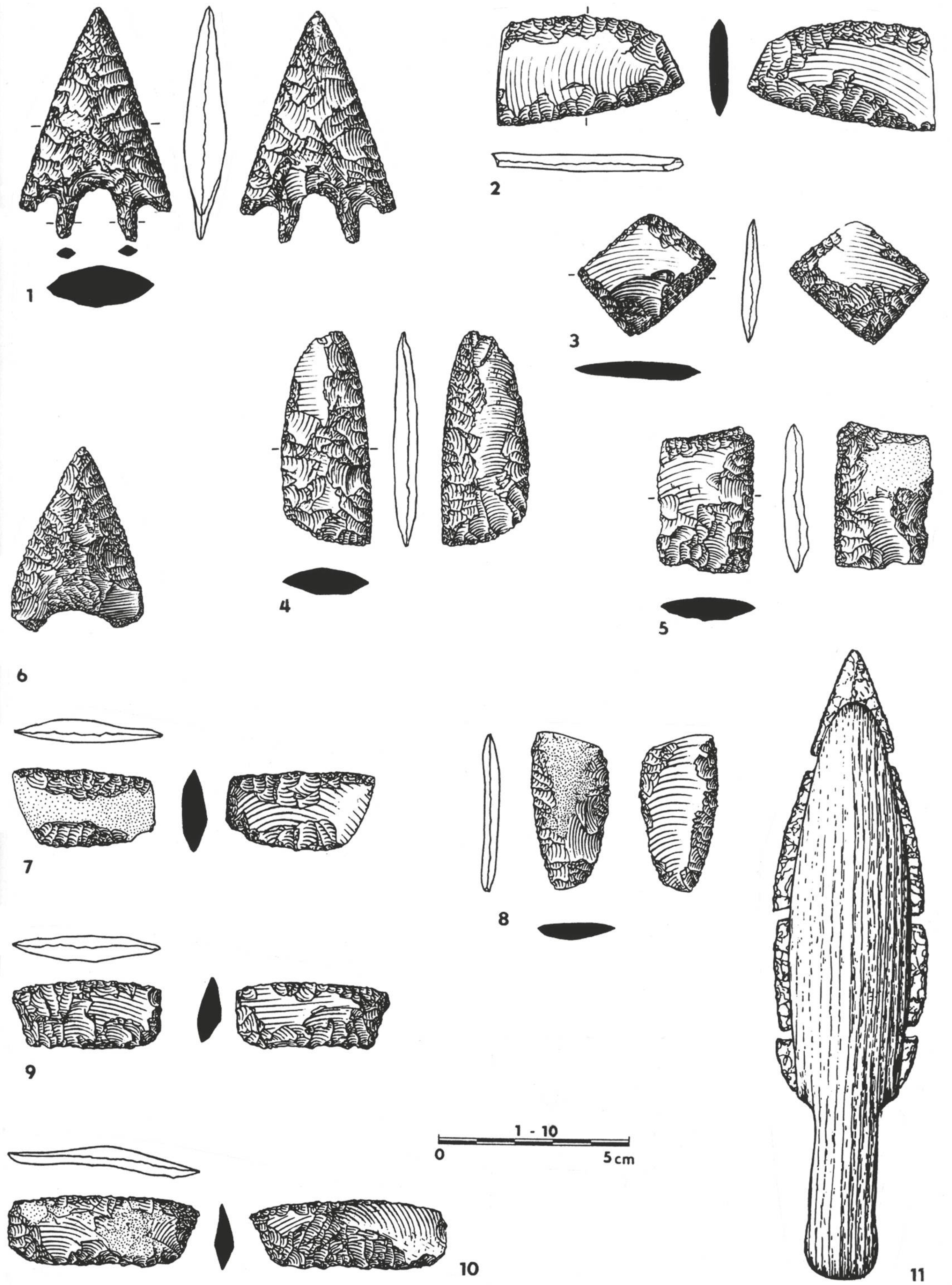
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Fig. 4. Marefy, Vyškov district. Chipped stone industry: 1-5 – grave no. XXI; 6-10 – grave no. XLII; 11 – probable position of silex segments in a dagger with wooden fix with and handle (after Šebela / Škrdla 1977).

position, orientated N-S. Potsherd (1) were found nearby.

1. Sherds of the bell-shape beaker. Inv. no. ?

Grave XLII

The rectangular grave pit (diameters unknown) was 160 cm deep. In its eastern and southern parts there was visible on the bottom „four-sided outline of dark-brown carbonated substance, in the western part „much narrower, but covering bigger surface" (probably a vestige of a wooden siding of the grave pit). Skeletal male remains rested on the left side in the crouched position, facing to the east. Beneath the skull and the upper part of the dead (more or less in the middle of the body) there was visible a spot of a dark substance that did not adhere very well to the clay of the pit fill (remains of a fir – according to F. Kalousek). The grave was furnished with a bowl at the back of the dead, with a bell-shape beaker inside (1, 2) At the hips of the dead there was a jar (3). Six silex pieces were dispersed between the pottery: a point and 5 retouched flakes (5-9). Archer wrist guard (10), not indicated of the grave plan, was found on the left-hand wrist (Fig. 3:1).

1. Bowl with a band-like handle. Smooth walls, gray-black in color. Height – 90 mm. Inv. no. 66333. Fig. 3:14.

2. Ornamented bell-shape beaker. Polished black walls. Height – 110 mm. Inv. no. 66330. Fig. 3:9.

3. Jar with a band-like handle. Smooth walls, gray-brown till black in color. Height – 125 mm. Inv. no. 66335. Fig. 3:3.

4. Silex triangular point with concave base. Length – 43 mm, width – 33 mm, thickness – 4 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66358 (the artifact has not been unidentified). Fig. 4:6; 13:5 (after Kalousek 1956).

5. Trapezoid with bilteral flat retouch. Length – 42 mm, width – 15 mm, thickness – 5 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66369. Fig. 4:10; 13:6b.

6. Trapezoid with bilateral flat retouch. Length – 35 mm, width – 17 mm, thickness – 4 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66363. Fig. 4:8; 13:7b.

7. Trapezoid with bilateral flat retouch. Length – 34 mm, width – 15 mm, thickness – 5 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66366. Fig. 4:9; 13:6a.

8. Trapezoid with bilateral flat retouch. Length – 32 mm, width – 17 mm, thickness – 5 mm. Silex from glacial sediments (Danian Formation). Inv. no. 66367. Fig. 4:7; 13:7a.

9. Trapezoid with bilateral flat retouch. Length – 15 mm, width – 15 mm, thickness – ? mm. Inv. no. 66364 (the artifact has not been unidentified). Fig. 13:8b.

10. Archer wrist guard with one corner missing. Length – 86 mm. Inv. no. 66331. Fig. 13:9.

III. Analysis of the funeral rite

The described graves of the Bell Beaker culture concentrated in the eastern part of the multi-culture cemetery (Fig. 2), although location only one of them (no. XLII) has been plotted the excavation documentation (Fig. 3:1). Position of the others is known only from description. Outlines of grave pits were diverse, i.e. elliptic, oval (nos. XXI, XXIX), round (no. XLI), and rectangular (no. XLII – Fig. 3:1). Each grave with preserved human remains contained only one skeleton. Skeletons from two graves (nos. XXI and XL), belonging to mature individuals, rested the crouched position on the left side, orientated N-S, facing E. On the ground of the recognized Bell Beaker culture funeral, where male dead were set into graves on the left side and head directed to the south (Havel 1978, 108), we presume that both the above named burials contained male remains. Artifacts found in the graves in question confirm such a presumption. Grave XXXII revealed a small amount of burnt human (?) bones. Despite its partial destruction by the Hallstatt cremation grave we can presume that it was a cremation burial of the Bell Beaker culture, quite common in Moravia (Havel 1978, 105-106). Concerning the grave construction important are observations made by A. Proházka during his exploration of grave XLII and confirmed in drawing documentation (Fig. 3:1). In the eastern and southern parts of the pit he observed „a four-sided outline of dark-brown carbonated substance, in the western part „much more narrower, but covering bigger surface" (Kalousek 1956, 80). It was probably a vestige of a wooden frame built around the burial. Such a construction has been associated to graves of people of higher social strata of the Bell Beaker culture (c.f. Smolín, grave 13/1951: Dvořák et al. 1996, Table 53-A). There are evidences that some sort of a funeral ceremony was held on the place of the burial in question. An outline of a dark substance (1 cm thick according to L. Hájek) that did not adhere very well to the pit fill was observed beneath the skull and the upper part of the dead. Both F. Kalousek and L. Hájek presume that the upper part of the body had been placed on a fir coat (Kalousek 1956, 80, and his unpublished report in the Archive of AÚ AV ČR, Brno, no. 940/50).

IV. Analysis of grave inventories

IV.1. Pottery and it position within the development scheme of the Bell Beaker culture

On the Marefy cemetery the pottery (altogether17 vessels) constitute more then half of the grave goods. The most frequent (6 vessels) are jars of various variants. One of them has a band-like handle stretching above the rim (no. XXXII – Fig. 3:10), two others – handles on the level with the rim (nos. XXII, XXI – Fig. 3:3,12). One jar has the handle missing (no. XXXII – Fig. 3:7). The artifact from grave XXI has a vestiges of the upper part of the handle just beneath the rim (Fig. 3:2).

Bowls constitute the second pottery group. There are 5 vessels of that kind, two of them semi-spherical (nos. XXI and XXXII – Fig. 3:6,13). One of the semi-spherical vessels has two round holes beneath the rim. Two bowls have band-like small handles. In one vessel the handle is fixed to the upper part to the rim (no. XLII – Fig. 3:14). The handle of the other vessel is located beneath the neck curved outward (Fig. 3:11). The bowl found in grave XXIX is deformed (Fig. 3:8).

Four vessels represent the traditional type of the bell-like beaker, two of them preserved in fragments (no. XXIX – Fig. 3:5; no. XLI). The completely preserved beakers have similar profiles of the belly. They are rather short and have wide openings. One is without ornament (no. XXXII – Fig. 3:4), the other has a banded stroked decorative motif (no. XLII – Fig. 3:9).

Two partially preserved vessels from grave XXXV have not been typologically identified.

Pottery assemblages constitute the basis for positioning the Marefy cemetery within the chronological frames of the Moravian Bell Beaker culture. Four Find Groups of the Bell Beaker pottery, denoted by Roman numerals: I, I/II, II, and III (Dvořák 1989, 202-204) have been singled out. Wide and short beakers from graves XXXII and XLII exclude their synchronization with Find Groups I and I/II, where higher forms have been recognized as typical (ibid. 1989, 200-204). Instead, similar forms are frequent in Find Group II and appear also in Group III. The Bell Beaker culture cemeteries in Brno-Holásky (Dvořák 1992, Table 15A:1, 19B:1,4-5, 26B:2,8,9) and Brno-Židenice I (Dvořák 1992, Table 30C:4) are exemplary in this respect. The first of them represents a chronological sequence from the end of Find Group II till Find Group III, the second one belongs to Find Group III (Dvořák 1992, 6). Both named cemeteries yielded also jars and bowls analogues to artifacts from Marefy grave assemblages (cf. Dvořák 1992).

IV.2. Polished stone industry

There is one artifact of that type in Marefy – the archer wrist guard found in grave XLII (Fig. 13:9). It is a rectangular plate with holes in the corners (one corner is missing). Similar artifacts are common on cemetery sites of the Bell Beaker culture (cf. Ondráček / Šebela 1985, Table 41:6).

IV.3. Chipped stone industry

The chipped stone assemblage consists of 13 artifacts. Seven of them come from Grave XXI (inv. nos. 66309-66313ab), the others – from grave XLII (inv. nos. 66362-66369). Only five of them (inv. nos. 66362-66364, 66366-66367, 66369; from grave XLII) are in the collection of the Moravian Museum in Brno. Artifacts from the other grave (no. XXI) have been later identified by us on the exhibition „Prehistory of Czechoslovakia" in the National Museum in Prague, assembled in 1950s.[1] After making copies, the originals were returned in 1999 to the Moravian Museum.

An artifact under inv. no. 66362 is questionable. It is a flake of the Krumlovský les type chert, variety I (after Přichystal 1984). In an unpublished L. Hájek's report (Archive of AÚ AV ČR, Brno, inv. no. 904/50), he links it with grave XXI. However, artifact with the same inventory number is related to another grave (no. XLII). Analysis of photographic documentation revealed that it differs evidently from the one we have in hands (compare Škrdla / Šebela 1997, Fig. 3:4 with Fig. 4 in this paper). It is possible that artifacts have been accidentally switched while being catalogued, or two pieces (one of them has been lost) obtained the same inventory number.

All other identified chipped stone artifacts are made of silex from glacial sediments, related to territory of today's Denmark (cf. description of grave inventories)[2]. Rock of this type appears in Tertiary (Danian) limestone sediments of the Baltic coast. Typical pieces are flat-formed, brownish or gray brownish in color, nontransparent, and abudant with light-gray and white fossil remains, especially *Bryozoa* (Přichystal 1994, 43). As a raw material for making tools is was used from the Middle Paleolithic Period. Towards the end of the Eneolithic in appeared in the Moravian Coded Ware culture, in assemblages of Sub-Group IIIC (Kopacz / Šebela 1998, Table II).

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[1] The authors acknowledge the valuable information of J. Turek, Faculty of Archaeology, Western Czech University, Plzeň.

[2] Petrographic expertise of the artifacts was made by A. Přichystal, Dept. of Geology and Paleontology, Faculty of Natural Science, Masaryk University, Brno.

Undoubtedly, the most remarkable artifact in the Marefy collection of chipped stone artifacts is the triangular form with two stems at the base, diameters 50 x 33 x 9 mm, from grave XXI (Fig. 4:1). It has been classified as a „point" or „arrowhead" (Kalousek 1956, 78). No similar artifact is known from territories of Moravia and Bohemia. Similar in general shape, but concave at the base, is the artifact from grave XLII. It is also smaller (43 x 33 x 4 mm; Fig. 4:6). Is has analogies on several cemeteries of the Bell Beaker culture, which – however – are smaller in size (length up to 33 mm). They are customarily classified as arrowheads (e.g. Ondráček / Šebela 1985, Tables 45:2-4,6, 46:2-3,6,8-9; Dvořák et al. 1996, Table 53A:3).

The other artifacts (11 pieces) are more or less trapezoid tools, partially shaped by flat retouching (Fig. 4:2-5,7-10). On the basis of their length we can distingush two variants of these tools: short (length 15-25 mm; 4 artifacts) and long (length 31-47 mm; 7 artifacts). Other parameters of both variants are similar (width 15-20 mm, exceptionally 22, thickness 4-6 mm).

As we have already mentioned, the collection of chipped stone artifacts from Marefy counts to 11 pieces. Eight of them have been available for analyses. They constitute the basis of our study.

Firstly, we will focus our attention to the trapezoid forms. They are undoubtedly similar to blades and as such were classified by F. Kalousek (Kalousek 1956, 78-81) and L. Hájek (cf. already cited unpublished report of this author). However, a detailed observation has revealed that the tools in question were shaped from rather thin and wide flake blanks. Consequently, we have been confronted with a new silex tool type, with outline similar to trapeze and flat retouch on both ventral and dorsal sides (Škrdla / Šebela 1997, 80).

IV.3.1. Typological-morphological characteristics and technology of the artifacts

In the instance of four artifacts, the trapezoid outline was obtained by means of shaping wide flakes that occasionally reveal vestiges of cortex (Fig. 4:5,7,10). The basal part of the flake was smoothened, the strik-

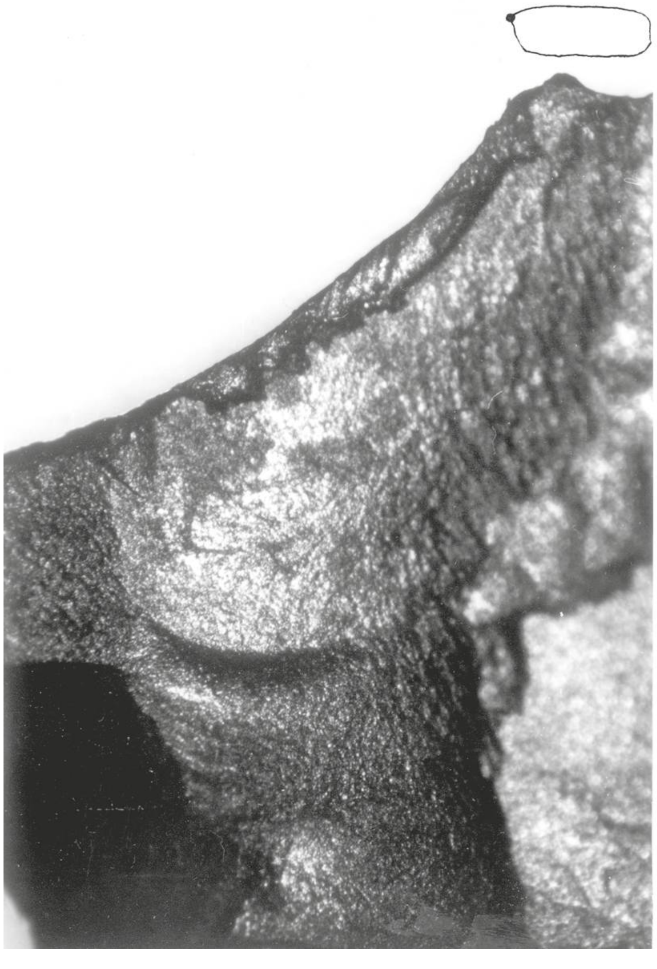


Fig. 5. Marefy, Vyškov district. Grave no. XLII. Bifacially, flatly retouched trapezoid (inv. no. 66369). The working edge (enlarg. 50 x).

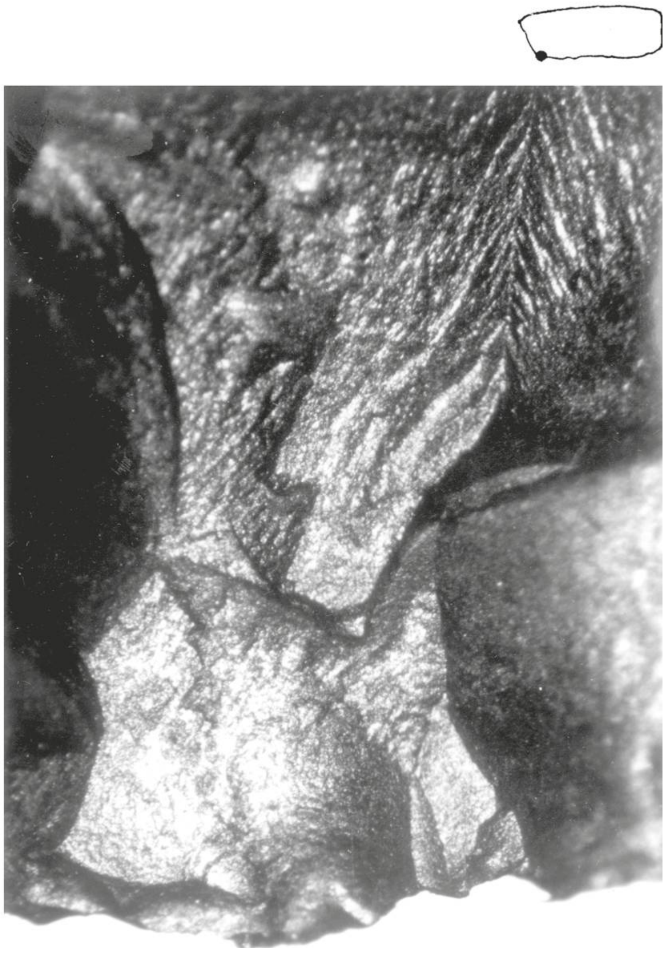


Fig. 6. Marefy, Vyškov district. Grave no. XLII. Bifacially, flatly retouched trapezoid (inv. no. 66369). The opposite (non-working) edge (enlarg. 50 x).

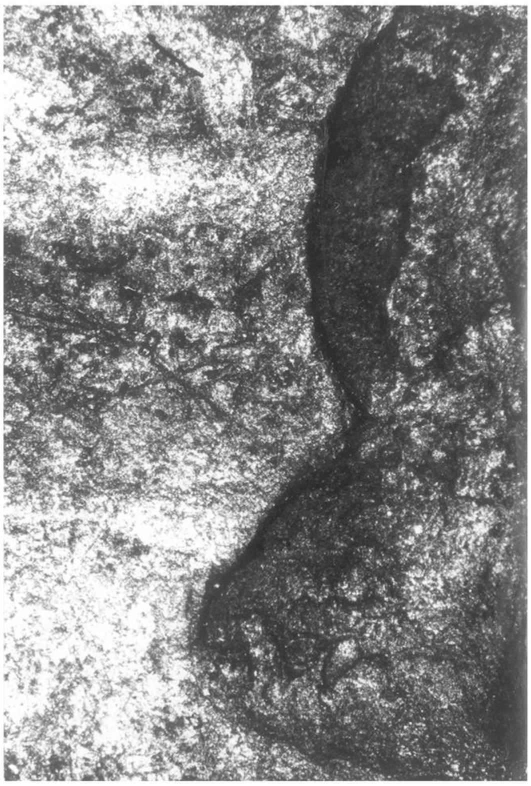
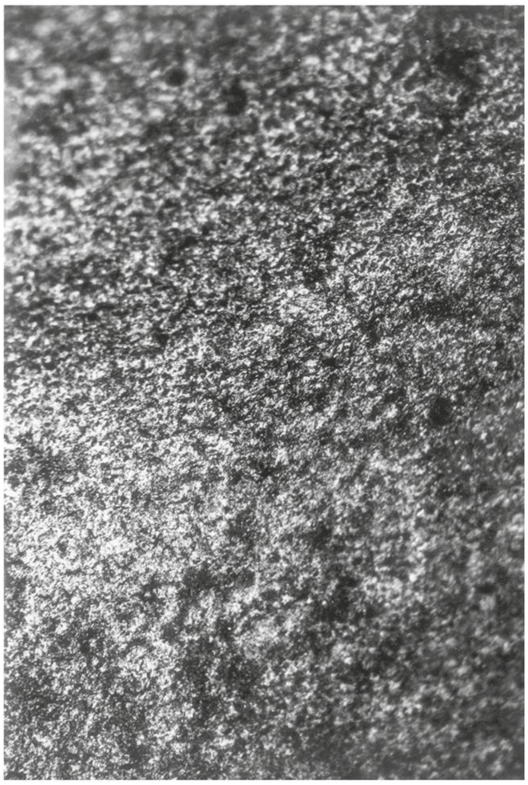


Fig. 7. Marefy, Vyškov district. Grave no. XLII. Bifacial, flatly retouched trapezoid (inv. no. 66366). Transition between the sharpened part (without utilization traces) and the part with striations (enlarg. 40 x).



Marefy, Vyškov district. Grave no. XLII. Bifacial, flatly retouched trapezoid (inv. no. 66366). Part without utilization traces – scar depression (enlarg. 80x). Fig. 8.

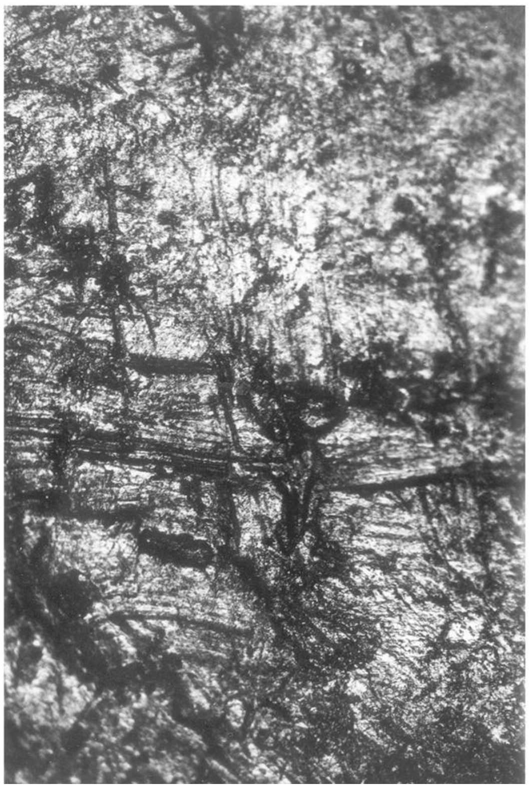
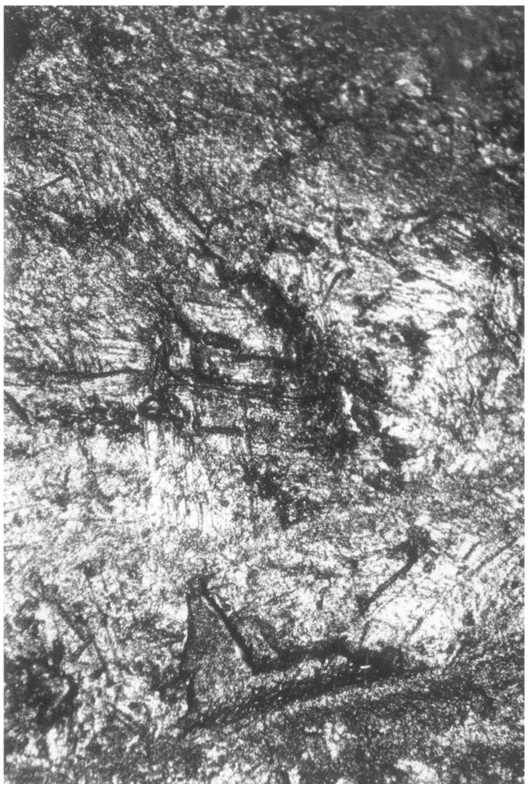


Fig. 9. Marefy, Vyškov district. Grave no. XLII. Bifacial, flatly retouched trapezoid (inv. no. 66366). Chaotically distributed scratches, the place of a possible contact with the handle (enlarg. 80x).



Marefy, Vyškov district. Grave no. XLII. Bifacial, flatly retouched trapezoid (inv. no. 66366). Chaotically distributed scratches, the place of a possible contact with the handle (enlarg. 40x). Fig. 10.

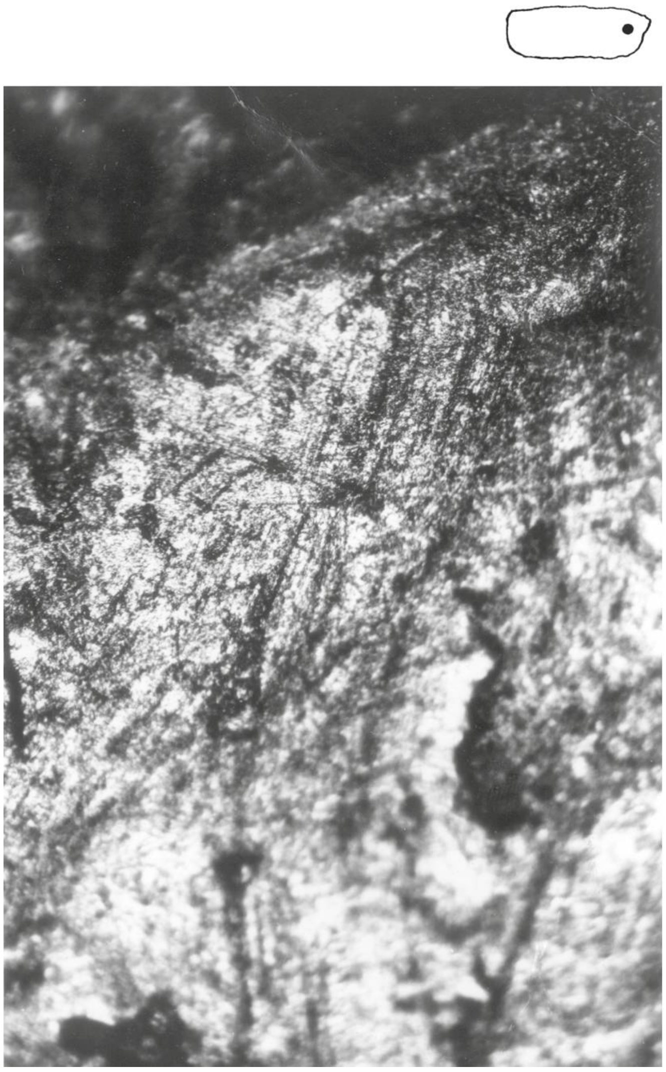


Fig. 11. Marefy, Vyškov district. Grave no. XLII. Bifacially, flatly retouched trapezoid (inv. no. 66369). The striation pattern (enlarg. 100 x).

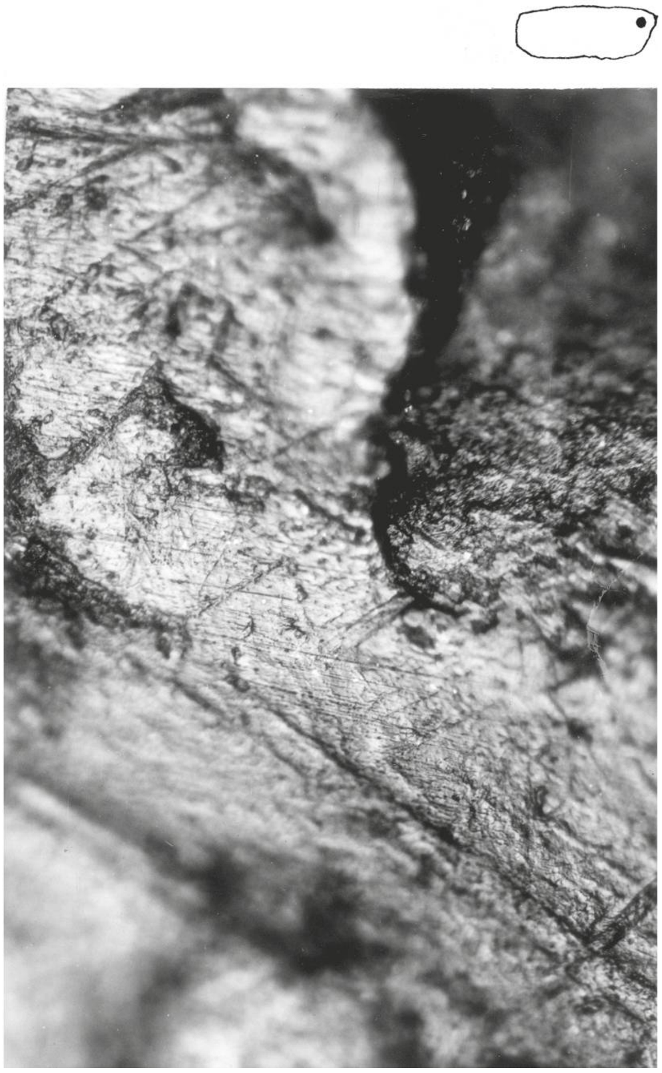


Fig. 12. Marefy, Vyškov district. Grave no. XLII. Bifacially, flatly retouched trapezoid (inv. no. 66369). The striation pattern (enlarg. 50 x).

ing bulb erased by retouching (manufacturing scheme – cf. Škrdla / Šebela 1997, Fig. 1:2). Edges of the form were sharpened (from both ventral and dorsal sides) by flat retouch. In three other cases, more oblong flakes (almost blakes, width/length ratio 1:2, Fig. 4:4,5,8) were used as blanks. These later mentioned artifacts were in lesser degree reshaped by retouching, as general outline of blanks used was close to trapeze. Seven artifact have straight cutting edges (Fig. 4:4,5,8), one – convex (Fig. 4:10).

IV.3.2. Utilization traces and functional analysis

Assemblages from both graves have been examined from the utilization point of view. Artifacts from grave XXI did not reveal any traces of wear (artifacts with inv. nos. 66308, 66312, and 66313b were examined; cf. Report in Archive AÚ AV ČR, Brno, no. 1711/00). Among artifacts from grave XLII, two bifacially retouched trapezoids from that grave (inv. nos. 66366 and 66369; Fig. 4:9-10), with most distinctive utilization traces, have been scanned with Leitz microscope[3] . For better results they were covered by silver. For photographic documentation we used two basic enlargements – 50 x and 100 x, optimal for obtaining the best results. Our attention was focused on distribution of traces of wear.

Traces of wear can be divided into three basic categories: edge microfracures, polish, and striation.

The junction area of main (lateral) and transversal edges reveals microfractures (Fig. 5), and the whole presumed working surface is covered by a glossy layer, macroscopically hardly visible. In contrast, the part of the tool opposite to the working edge does not show any traces of wear (Fig. 6). It is a difference in character of the surface of the areas of negatives of edge

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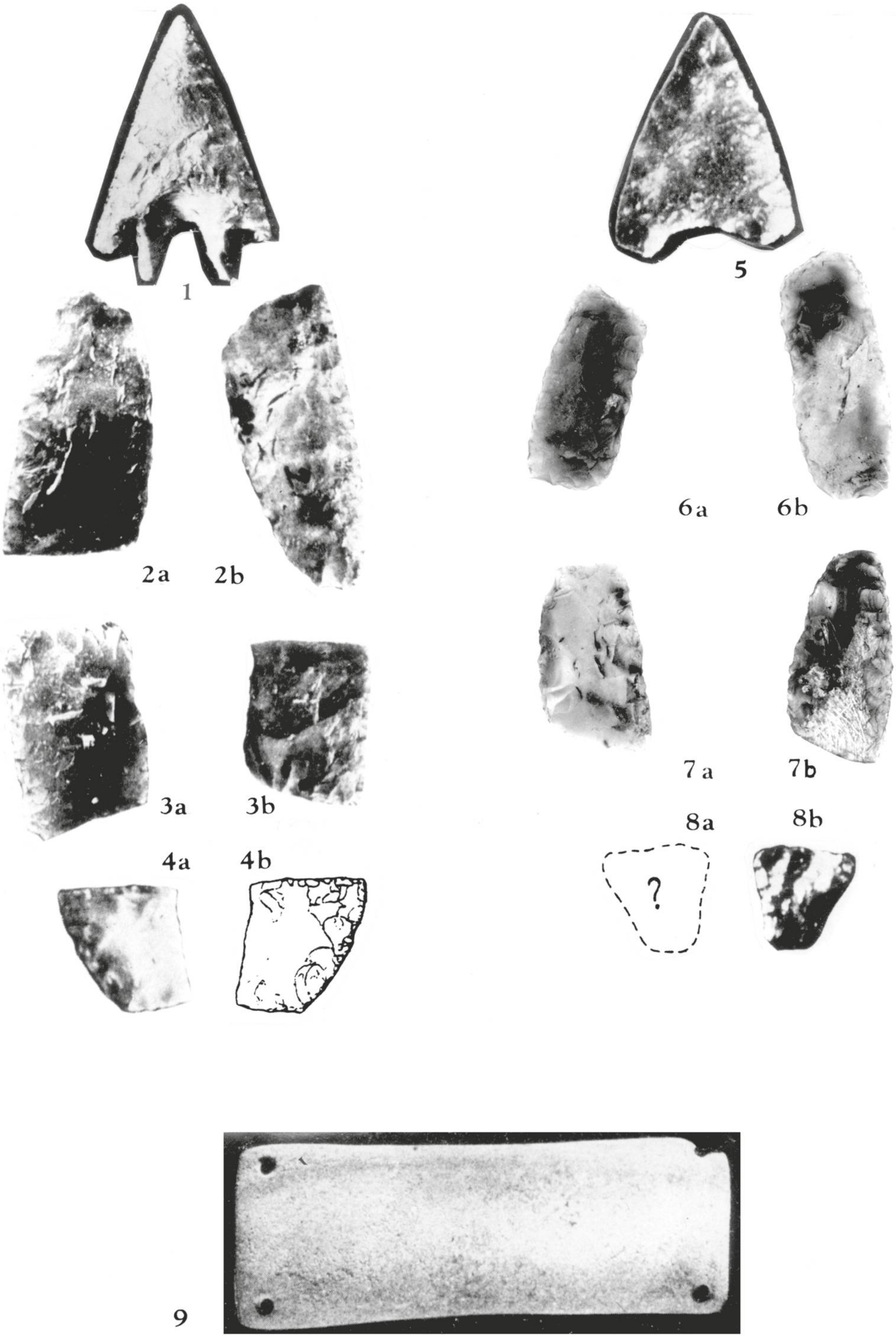
[3] The authors acknowledge the important contribution of F. Matějka, MS., Dept. of Scientific Instruments, AV ČR, Brno, who made for photographic documentation of utilization traces of the examined artifacts.


1
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4b
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8b
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9

Fig. 13. Marefy, Vyškov district. Grave no. XLII. Probable setting of silex segments in a fix of the wooden dagger with handle: 1-4 a-b – grave no. XXI; 5-8 a-b grave no. XLII; 9 – grave no. XLII. After Kalousek 1956.

microchips, which is only polished, and more raised parts, more liable to wear (Fig. 7, 8). Obviously, the thickest part the artifact was in the most intensive contact with the tool binding or handle. It shows clearly visible striation, chaotically distributed (Figs. 9, 10). Towards the working edge they become more regular and eventually assume a pattern of straight, parallel, inter-crossing lines running in three directions (Figs. 11, 12). The changes are smooth. It is also not possible to distinguished exact limits of glossy areas, which merge with parallel striation lines near the edge.

The cause of the parallel striation is unclear. It could have been caused by utilizing the tool in such a way that its surfaces were subjected to continuos contact with the working material. Edges were in use less intensively and obtained only the glossy polish. We should also recall the example of the obvious analogies – Neolithic sickle blades. In the latter forms, areas of the most intensive contact with the working material locate ca. 5 mm from the edge. Most of the blade was inserted in the handle and only a small part of it was strictly functional.

V. Interpretation and conclusion

On the basis of the described utilization traces (microfractures and striations, which are typical wear resulting from working with a hard material, together with glossy polish caused by a soft substance) we conclude that the artifacts in question were used in many ways (they were multi-function tools). We propose to term them as longer – or shorter – trapezoids with bilateral flat retouch (Škrdla / Šebela 1997, 80). The analysis indicates that four examined artifacts of that type were set in a handle of wood or bone. Such a presumption is confirmed by location of artifacts in both graves.

Grave XXI yielded 6 trapezoid artifacts (4 longer and 2 shorter), similar to those subjected to our detailed examination, as well as the triangular artifact with two stems at the base. All the artifacts lay „under the right arm of the dead" (male, according to the skeleton position), spread „from the elbow to the hand" in the following order: „the silex with two stems, two other blades, two trapezoid blades, and two small blades (...) Between them were vestiges of an organic substance" (Kalousek 1956, 78). In our terminology there were: the silex artifacts with two stems (Fig. 13:1), two long (Fig. 13:2ab), two semi-long (Fig. 13:3a-b), and two short (Fig. 13:4a-b) trapezoids with (partial) bilateral flat retouch.

In the second grave (no. XLII), also containing male remains (cf. discussion on funeral rite earlier in this paper), there were found 6 silex artifacts. They lay in two rows (Fig. 3:1). According to F. Kalousek (Kalousek 1956, 80) there were „the large heart-like point and five silex blades, similar to those from grave 1" (i.e. grave XXI). Distribution of artifacts was also similar. After the large triangular form, in this instance with a concave base (Fig. 13:5), there were two long trapezoids with bilateral flat retouch (Fig. 13:6a-b), then two other, slightly shorter forms (Fig. 13:7a-b) followed by the sort one. In the latter instance it is possible that there could have been two artifacts, one of them being omitted during the grave exploration (Fig. 13: 8a-b).

The artifacts with bilateral flat retouch from grave XXI bore traces of an organic substance. It indicates that originally they had been set in a wooden handle or case. Thus, triangular silex points were points of bigger tools, with trapezoids forming side edges. Taking into account position of artifacts – in grave XXI by the arm bones and in grave XLII between vessels (Fig. 3:1), daggers should be considered as most probable. If a long-shafted spear should be the case, we would rather expect its location in free parts of the grave pit. The dagger theory has been confirmed in both cases by reconstruction of the tool. It has proved that silexes arranged in the described order follow the outline of a short, two-edged weapon with a distinctive transition to the short handle – that is the dagger. In consequence, triangular and trapezoid silex artifacts should be considered as segments of daggers with wooden handle, into which they were inserted (Fig. 4:11).

Segmental silex daggers resemble – in form and by flat retouching their segments – classical leaf-shape silex daggers. The latter artifacts were, most probably, also set in wood. In Moravia they have been registered on 21 sites – altogether 22 pieces (Šebela 1998, 199-207, Abb 1a). Nine of them are from grave assemblages (the others being strayed finds). On the ground of pottery they have been related to the Proto-Únětice culture (Ondráček 1967, Fig. 21:3a-b,4, 26:1-7; Šebela 1998, Taf. 1, 2, 4:1-2). At the close of the Eneolithic Period it occupied a territory to the west of the Morava River. In the territory of Moravia these leaf-shape daggers have been recognized as exported from the north. The raw material used for making these tools is also of the northern origin. It has been identified as „silex from glacial sediments", deposits of which locate to the north of the Moravian Gate up to Scandinavia (cf. Šebela 1998, 210). It should be underlined that silex segments from both Marefy graves are made from the same kind of rock.

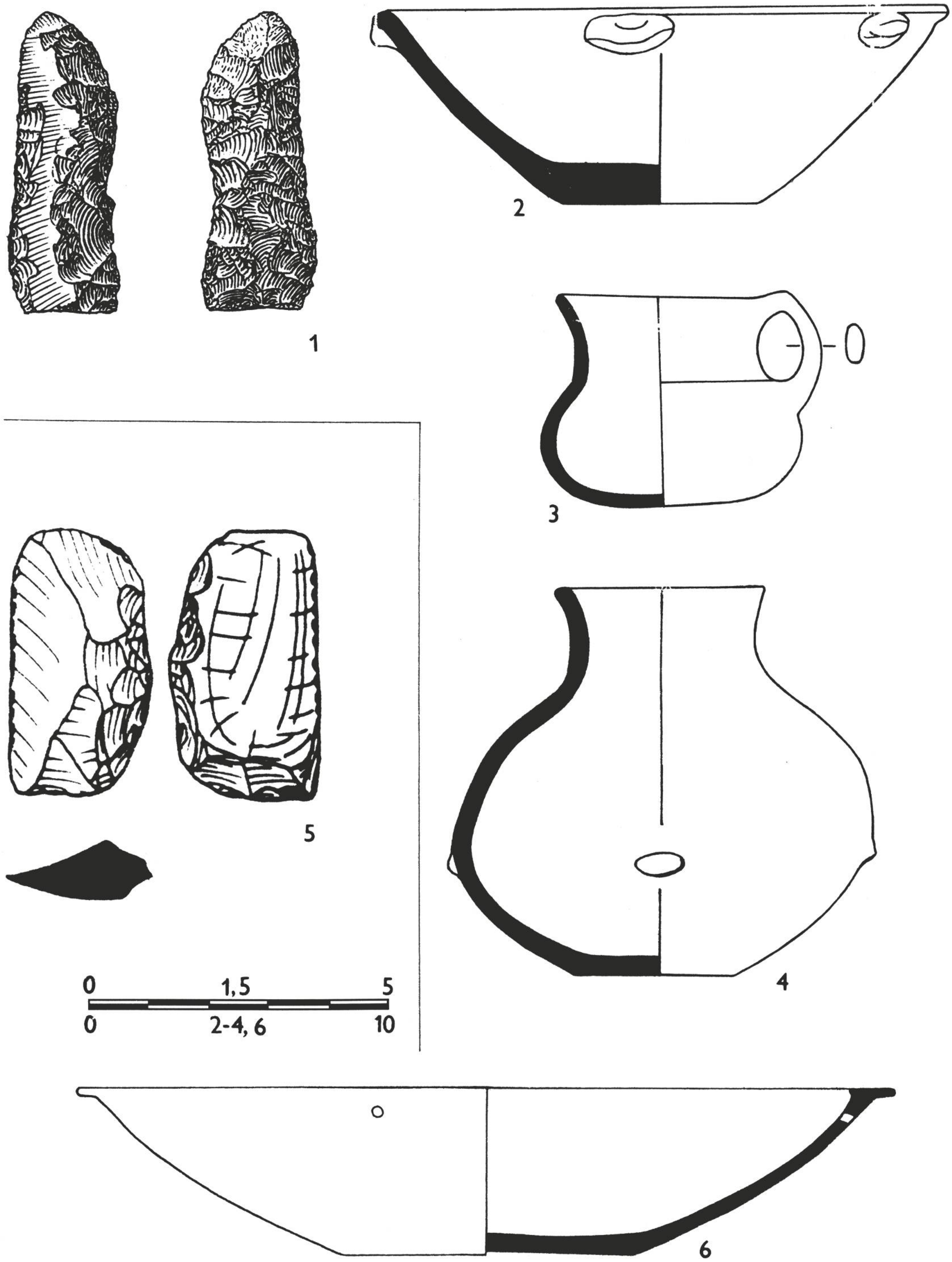

Fig. 14. Moravia: 1-4 Šlapanice, Brno-venkov district – grave no. 11 (Proto-Únětice culture); 5-6, Brno Židenice, Brno-město district, grave no. 10/1932 (Bell Beaker culture; after DVOŘÁK 1992).

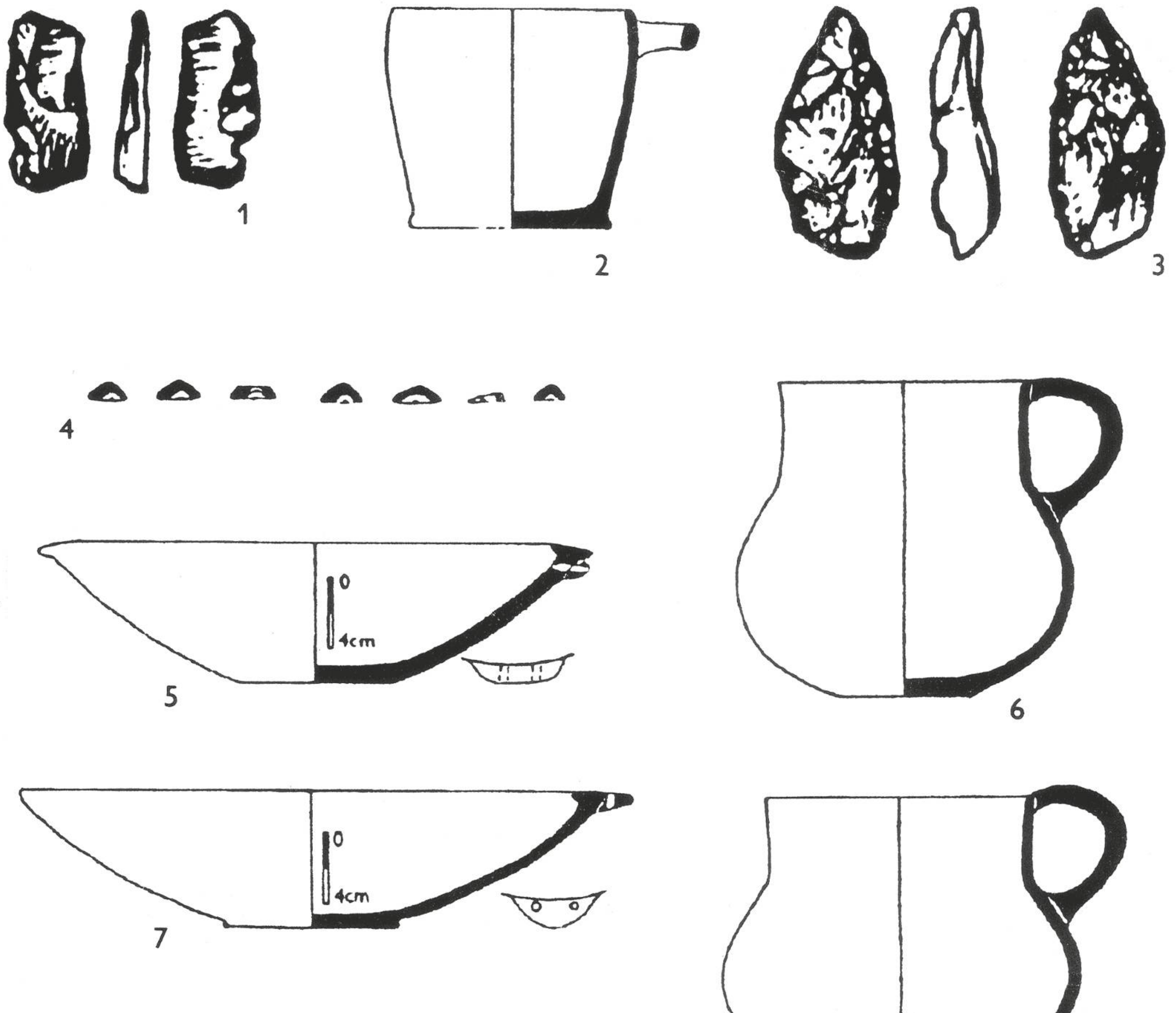
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Fig. 15. Moravia: 1-10 Záhlinice, Kroměříž district – grave no. 67/89 (Bell Beaker culture; after Dvořák / Rakovský / Stuchlíková 1992).

Segmental silex daggers have not been recognized so far on the Moravian territory. However, similar forms are known from Denmark. Unlike the Marefy artifacts, the Danish analogies had handle made from bifacially retouched rectangular segments (LOMBORG 1973, Fig. 41). In general, leaf-shape outline they are close to silex daggers of Type I, similar to those already mentioned Moravian daggers of the Proto-Únětice culture. E. Lomborg names them „Type VIC" in his typological segments (LOMBORG 1973, 63). In chronological term they are younger then their Moravian counterparts; we can synchronize them with Classic and Post-Classic Phases of the Únětice culture, i.e. with the younger period of the Early Bronze Age (cf. ŠEBELA 1998, 210).

VI. Conclusions

The trapezoids with bilateral flat retouch from the Marefy cemetery represent a new type of silex artifact made with the flake technique. The peak of this method of chipping is in Central Europe related with the Early Bronze Age, namely with units of the Epi-Corded Circle (Complex). The earliest component of this Complex is the Chłopice-Veselé culture, followed by the Nitra culture (eastern Moravia and western Slovakia) and the Mierzanowice culture (Little Poland).

In Moravia the examples of the flake technique we can find on territories to the west of the Morava River in graves of the Corded Ware culture, local Sub-Group IIIC (KOPACZ / ŠEBELA 1992) and on cemeteries of the Proto-Únětice culture (KOPACZ / ŠEBELA 1998, OLIVA 1996). To the east from the river of that name we have assemblages of the Epi-Corded Circle in Holešov (cf. ONDRÁČEK / ŠEBELA 1985; SVOBODA 1985; VALDE-NOWAK 1988).

Trapezoids with bilateral flat retouch from Marefy constitute a slightly different issue. Published archaeological sources from Bohemia (HÁJEK 1968) and Moravia (HÁJEK / DVOŘÁK 1990; DVOŘÁK 1992; DVOŘÁK ET AL. 1996) bring more examples (although not fully clear) of artifacts of this type.

In the Moravian milieu of the Bell Beaker culture we can trace a similar artifact in grave 10/1932 in Brno-Židenice(DVOŘÁK 1992, 19). The grave pit was 75 cm deep and contained skeletal remains. The silex artifact (Fig. 14:5) was found in a semi-spherical bowl (Fig. 14:6), 20 cm beneath the skeleton. It is similar in form and size (length 46 mm, width 25 mm, thickness 10 mm) its counterparts from Marefy. If was made – according to A. Přichystal – of Jurassic flint from Cracow-Częstochowa Upland (DVOŘÁK 1992, 19, 48).

To complete our review we should mention bifacially worked-out flake from grave 67/89 on the cemetery site in Záhlinice, Kroměříž district (Fig. 15:3) of a slightly burnt silex probably of glacial origin (DVOŘÁK / RAKOVSKÝ / STUCHLÍKOVÁ 1992, 218).

Interesting find has been also registered in Bohemia, in grave 2 of the Bell Beaker culture in Rosnice, Hradec Králové district (VOKOLEK 1965). It is a flatly retouched rectangular segment with traces of use (Fig. 16:1) made of silex from glacial sediments, dimensions: length 41 mm, width 10-14 mm, thickness 5.5 mm.

Remaining with the same cultural complex we should pay attention to artifacts from cemeteries of the Csepel group of the Bell Beaker culture in the vicinity of Budapest (BIRÓ 1991, Fig. 4:5; ENDRÖDI 1992, Fig. 79:5).

Returning to Moravia, another similar object is among artifacts from the cemetery of the Proto-Únětice culture in Šlapanice, Brno-venkov district, grave 11 (Fig. 14:1-4). It was registered by J. Ondráček in his dissertation (ONDRÁČEK 1964, Tab. 64:5) as „a flake knife with flat surface retouch" (Fig. 14:1). Unfortunately, the same author does not mention the find in his monographic study on the Moravian Proto-Únětice culture, in the part devoted the chipped stone industry (ONDRÁČEK 1964, 415-416). Precisely, it is a flatly retouched artifact 50 mm long and 20 mm wide. In this case we cannot determine, however, if it was made of flake or blade blank. Retouch of one edge of the artifact is close to blunt, while the other edge – probably the working one – shows traces of wear. Contrary to segments from Marefy, the Šlapanice object was made of a local rock. It is either the Moravian Jurassic chert or chert of the Krumlovský les type, variant III (expertise of A. Přichystal, cf. unpublished Excavation Report in Archive of AÚ AV ČR, Brno, no. 1760/00) [4].

Our analysis indicates that the discussed type of silex artifacts, made with use of the flake technique, is linked mainly with the Bell Beaker culture. It should be placed among leading forms of chipped stone industries of the Moravian Terminal Eneolithic and the Early Bronze Age in Central European perspectives. Chronology of the Marefy cemetery, and also that of Brno-Židenice, which has been linked by pottery with Find Group III of the Bell Beaker culture, corroborate with this hypothesis. Contemporary are also other discussed finds – the grave from Záhlinice, Kroměříž district (DVOŘÁK / RAKOVSKÝ / STUCHLÍKOVÁ 1992, 222), and the grave of the Bohemian Bell Beaker culture from Rosnice, Hradec Kralove district.

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[4] Collection of the National Museum, Prague.

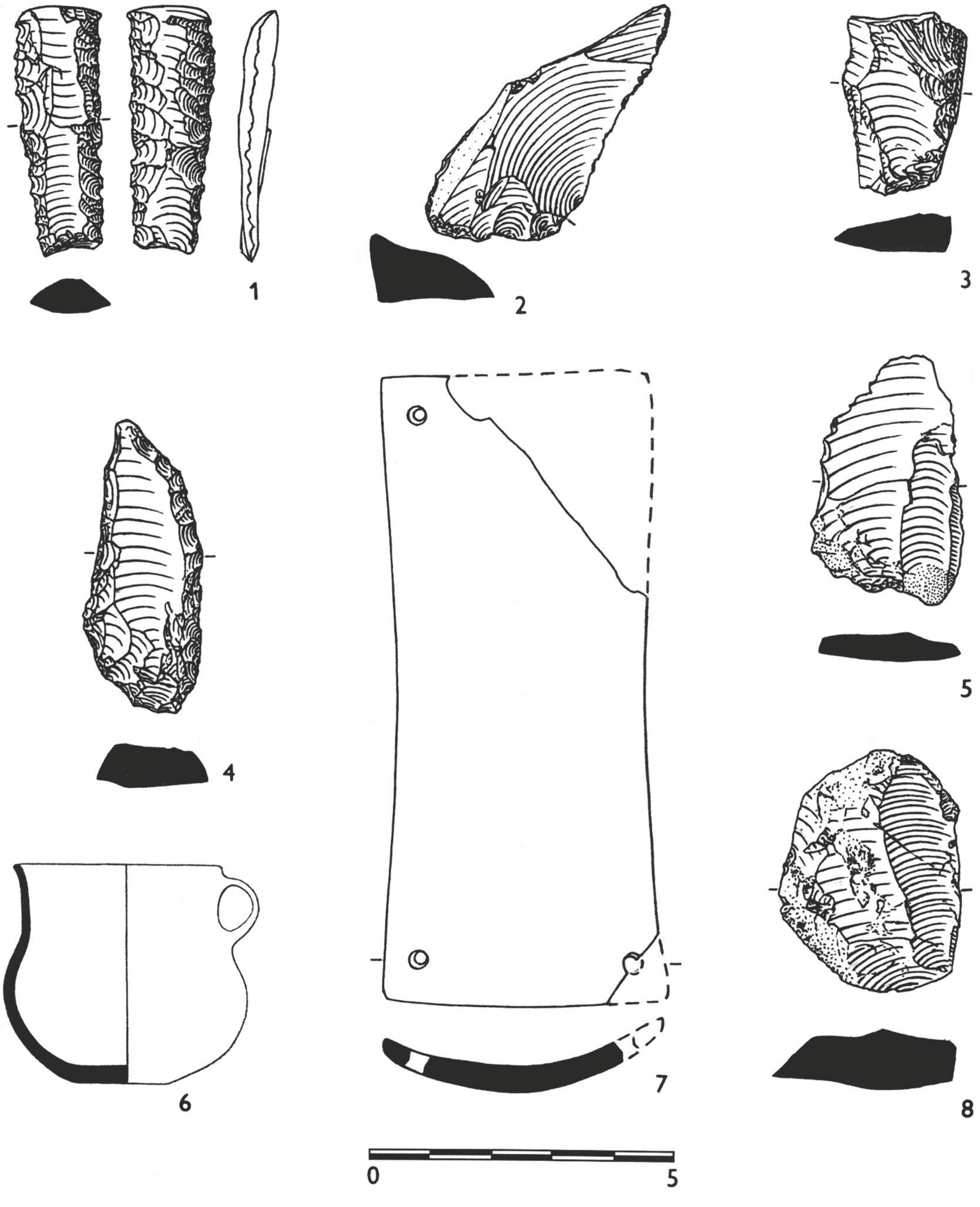

Fig. 16. Bohemia: 1-8 Rosnice, Hradec Králové district – grave no. 2 (Bell Beaker Culture).

The discussed sites of the Bell Beaker culture on the territory to the west of the Morava River are contemporary with the final stage of Corded Ware culture (Sub-Group IIIC) and the rise of the Proto-Únětice culture in southeastern Moravia (with the already mentioned site in Šlapanice, Brno-venkov district). Areas to the east from the Morava River were in period were domain of the Chłopice-Veselé culture. Pottery of these units (certainly, with the exception of the last named) reveal influences from the Carpathian

Basin. Their chipped stone industries based on the flake technique also constitute a common element.

Trapezoids with bilateral flat retouch were accompanied in both Marefy graves by triangular silex forms, either with two stems (Fig. 4:1) or with concave base (Fig. 4:6). Both are bifacially shaped by flat retouching and comparable in size (40-50 mm). These artifacts should not be described as arrowheads, the latter being considerably smaller (usually 30 mm long, maximum 33 mm). Besides, arrowheads of the Bell Beaker were made of different rocks – e.g. the Jurassic flint from Cracow-Częstochowa Upland in Holešov (Ondráček / Šebela 1985, 82-84) and chert of the Krumlovský les type in Moravská Nová Ves – Hrušky (Stuchlík / Stuchlíková 1996, 95). Artifacts of similar shape but bigger size should be rather classified as spearheads. Such was the line of thoughts of F. Kalousek (Kalousek 1956, 89-90) but his theory has been forgotten. We prefer to term the discussed artifacts as „flatly retouched points" made of the same rock as trapezoids, i.e. silex from glacial sediments. It is possible that this form was linked with the final stage of the Moravian Late Eneolithic Period and was made with the same chipping technique as trapezoids.

At the conclusion, we should try to answer the following question: for what reason composed segmental daggers appeared in Moravia? We should rather exclude a lack of copper during the period of Find Group III of the Bell Beaker culture (as we remember, the Marefy cemetery has been associated with this Group). Such an inference is based on finds of a casting form and copper particles in the settlement complex in Brno-Obřany (Ondráček / Dvořák in press). This site gives as many important data related to cultural characteristics of the Bell Beaker culture in the period of Find Group III, and also on copper processing in the final stage of this unit.

Segmental silex daggers resemble in form leaf-shape silex daggers from grave of the Proto-Únětice culture. These artifacts have been recognized as northern imports. From this basis we draw the conclusion that the segmental daggers emerged as an attempt of the Bell Beaker people in the final development stage of this unit to imitate the leaf-shape silex daggers. They reflect influences of the Moravian Proto-Únětice culture on technology of the Bell Beaker communities that were not in closer contacts with the Baltic zone and could have not relied on northern imports. Instead, they developed local substitutes. As a raw material of these "substitutes" nodules of North Moravian glacial deposits may have been used rather than materials imported form primary outcrops in Poland. On the other hand, from the present-time technological point of view, the segmental form may be classified as more developed. Contrary to classic single piece dagger, where damage destroyes the whole dagger, the segmentary one was easily repareable by particular damaged segment exchange.

If we take into account all available data we conclude the cemetery of the Bell Beaker culture in Marefy should be classified as an early appearance within Find Group III. During this period vast territory of Central Europe witnessed deep technological changes in chipped-stone tool production. Chipping based on exploitation of blade cores lost its dominant position on behalf of simple flake technique. Consequently, new types of stone tools appeared. In the Bell Beaker culture they were – according to our present knowledge – trapezoids with bilateral flat retouch (and similar shorter forms), and also flatly retouched points (with two stems or concave base). Both the above named artifacts types, in combination – one point and three double trapezoids (as in graves XXI and XLII in Marefy), could have formed the segmental dagger. Silex pieces were set in a wooden fix with a short handle. Appearance of similar silex artifacts on other sites (e.g. in Brno-Židenice) suggests that segmental daggers form Marefy were not exceptional finds. They are similar to leaf-shape silex daggers frequent in Denmark, Schleswig-Holstein, and Scandinavia (as northern imports they appear in Moravia in graves of the Proto-Proto-Únětice culture). We assume that segmental daggers appeared as their imitations. They indicate that the Bell Beaker people did not maintain – at least in the closing phase of existence of this identity – effective trade contacts with territories bordering the Baltic Sea. Instead, they produced substitutes. The question remains if it was only local (Moravian) phenomenon, or an element acompannig development of the Bell Beaker culture on territories of Central and Western Europe.

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* This article is suported by the Grant Agency of the Czech Academy of the Sciences, (no. A 8001202).

References

Biró T. K. 1991. Bell-Beaker Bulture lithic implements from Hungary. *Acta Archaeologica Carpathica* XXX, 87–96.

Chleborád M. *Pravěké hroby durinských skrčků na Bučovsku a v okolí (zvláštní výtisk).* Bučovice.

Dvořák P. 1989. Die Glockenbecherkultur in Mähren. In: *Das Äneolithikum und die früheste Bronzezeit (C^{14} 3000-2000 b.c.) in Mitteleuropa: kulturelle und chronologische Beziehungen.* Acta des XIV. Internationalen Symposium Prag – Liblice 20.-24. 10. 1986. Praehistorica XV, 201–205. Praha.

Dvořák P. 1992. *Die Gräberfelder der Glockenbecherkultur in Mähren (Bez. Blansko, Brno-město, Brno-venkov). Katalog der Funde I.* Brno.

Dvořák P. / Hájek L. 1990. *Die Gräberfelder der Glockenbecherkultur bei Šlapanice (Bez. Brno-venkov).* Brno.

Dvořák P. / Rakovský I. / Stuchlíková J. 1992. Pohřebiště lidu s kulturou se zvoncovitými poháry u Záhlinic, okr. Kroměříž. *Pravěk N. Ř.* 2, 215–232.

Dvořák P. / MatějíčkovÁ A. / Peška J. / Rakovský J. 1996. *Die Gräberfelder der Clockenbecherkultur in Mähren (Bezirk Břeclav). Katalog der Funde II.* Brno – Olomouc.

Endrődi A. 1992. A korabronzklori harangedémy kultúra telepe és teme Szigetsentmiklós határában. Regeszeti kutatások az MOI autópálya nyomvonalán I. *BTM Mühely* 5, 83–200.

Hájek L. 1968. *Kultura zvoncovitých pohárů v Čechách.* Archeologické studijní materiály 5. Praha.

Havel J. 1978. Pohřební ritus kultury zvoncovitých pohárů v Čechách a na Moravě. *Praehistorica* VII (Varia Archeologica 1), 91–117. Praha.

Kalousek F. 1956. Lid se zvoncovitými poháry na Bučovsku (Morava). *Časopis Moravského zemského muzea* XLI, 53–100.

Kopacz J. / Šebela L. 1992. Chipped Stone Industries of the Moravian Corded Ware Culture. *Przegląd Archeologiczny* 39, 67–89.

Kopacz J. / Šebela L. 1998. Chipped Stone Materials of the Moravian Proto-Únětice Culture in Moravia. *Przegląd Archeologiczny* 46, 37–57.

Kopacz J. / Valde-Nowak P. 1987. Episznurowy przykarpacki krąg kulturowy w świetle materiałów kamiennych. *Archeologia Polski* XXXII, 55–92.

Lomborg E. 1973. *Die Flintdolche Dänemarks*. København.

Oliva M. 1996. Štípaná industrie z pohřebiště u Moravské Nové Vsi – Hrušek. In: Stuchlík S. / Stuchlíková J., *Pravěká pohřebiště v Moravské Nové Vsi – Hruškách.* Studie AV ČR Brno XVI/1, 186–189. Brno.

Ondráček J. 1967. Moravská protoúnětická kultura. *Slovenská archeológia* XV, 389–446.

Ondráček J. 1964. Časně únětická kultura na Moravě a problém jejího vzniku. Unpublished Ph.D. dissertation. Brno.

Ondráček J. / Šebela L. 1985. Pohřebiště nitranské skupiny v Holešově. *Studie muzea Kroměřížska* ´85, 2–130.

Přichystal A. 1994. Zdroje kamenných surovin. In: Svoboda J. et al., *Paleolit Moravy a Slezska.* The Dolní Věstonice studies, Volume I, 43–49. Brno.

Stuchlík S. / Stuchlíková J. 1966. *Pravěká pohřebiště v Moravské Nové Vsi – Hruškách.* Studie AV ČR Brno XVI/1. Brno.

Svoboda J. 1985. Štípaná industrie nitranské skupiny z pohřebiště v Holešově. *Studie muzea Kroměřížska* 85, 180–184.

Šebela L. 1998. Funde von spätäneolithischen und altbronzezeitlichen silexdolchen in Mähren. *Saarbrücker Studien und Materialien zur Altertumskunde* 6/7 (1997/1998), 199–226.

Šebela L. 1999. *The Corded Ware Culture in Moravia and in the Adjacent part of Silesia (Catalogue).* Fontes Archaeologiae Moraviacae XXIII. Brno.

Šebela L. / Škrdla P. 1977. Pozdně eneolitické složené dýky na Moravě. *Přehled výzkumů* 1993-1994 (1997), 77–86.

Valde-Nowak P. 1988. Zabytki kamienne w grobach grupy nitrzańskiej. *Acta Archaeologica Carpatica* XXVII, 31–59.

Vokolek V. 1965. Pohřebiště zvoncovitých pohárů v Rosnicích. *Archeologické rozhledy* XVII, 613–616, 646–645.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

GLOCKENBECHER IN OSTÖSTERREICH- ANDERE FRAGEN ANDERE ANTWORTEN?

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> *Die Grundlage aller historischer Folgerungen ist eine feste, zuverlässige Chronologie. Ohne eine entsprechende relative Chronologie und glaubwürdige Beziehungen können die einfachsten Feststellungen auf falschen Weg geraten, und vielmehr natürlich, die auf solche gegründeten, großangelegten historischen Konzeptionen.*
>
> Nándor Kalicz, Neue Aspekte über die Chronologie der Nyírség-Gruppe, Slov. Arch. XXIX, 1981, 67.

Die „Glockenbecherkultur" hat über Jahrzehnte Archäologen und Laien gleichermaßen fasziniert. Im Zentrum des Interesses stand hauptsächlich der namengebende reich verzierte Becher, der scheinbar gleichförmig über große Gebiete West- und Mitteleuropas verbreitet war. Mit dieser Art von Gefäßen fand man Armschutzplatten, Silexpfeilspitzen, Metalldolche, v-förmig durchbohrte Knöpfe, verzierte Eberhauer und bogenförmige Knochenanhänger sowie in seltenen Fällen Goldbleche oder Ringe aus Silber. Besonders bemerkenswert erwies sich die Tatsache, dass man bei Gräberanalysen in der Ostgruppe der „Glockenbecherkultur" feststellte, dass Frauen als rechte Hokker mit dem Kopf im Süden und Männer als linke Hocker mit dem Kopf im Norden beigesetzt wurden und dass einige Beigaben hauptsächlich in Frauen- und andere hauptsächlich in Männergräbern gefunden wurden. Chronologiesysteme wurden erarbeitet und verfeinert. Theorien zur Entstehung und Ausbreitung dieser Kulturerscheinung wurden ersonnen. Töpfe, Menschen und Ideen wanderten durch Europa und mit ihnen all jene Archäologen, die sich mit ihnen beschäftigten.

Die österreichische Glockenbecherforschung musste sich in chronologischen Fragen meist an den benachbarten Gebieten orientieren, ohne eigenständige Modelle entwickeln zu können. Dies lag und liegt vor allem an der bescheidenen Materialbasis. Der Mangel an Fundstellen und gut verwertbarem archäologischen Fundgut betrifft genau genommen das gesamte Endneolithikum in Ostösterreich. Die geringe Funddichte beginnt am Ende der Badener Kultur. Mit zahlreichen Siedlungsfunden, einer größeren Anzahl von Gräbern, Gräbergruppen und den großen Gräberfeldern bietet erst wieder die Frühbronzezeit eine ausreichende Quellenbasis für unterschiedlichste Untersuchungen und Analysen.

1995 schrieb E. Ruttkay (RUTTKAY 1995, 178), den damaligen Forschungsstand zum Endneolithikum in Ostösterreich zusammenfassend: „Auf unseren Untersuchungsgebiet lassen sich demnach heute zwischen der klassischen Badener Kultur und dem Erscheinen der Glockenbecherkultur folgende Etappen namhaft machen: 1. Fazies Wachberg vorab im westlichen süddanubischen Niederösterreich, 2. Mödling-Zöbing-Gruppe, 3. Kosihy-Čaka/Makó-Gruppe etwa um die „Ungarische Pforte". Im Burgenland dürfte in der Zeit der reifen Jevišovice-Kultur mit deutlichen Ig I Einflüssen gerechnet werden. Welche einheimische Kulturgruppe diese Einflüsse trug, ist heute noch offen. Die Anfänge der schnurkeramischen Lokalgruppe Herzogenburg dürften mit der Kosihy-Čaka/Makó-Gruppe einhergehen."

In ihren Fundortlisten für das Burgenland, Niederösterreich und Wien gibt sie 44 Fundstellen der Jevišovice-Kultur an (RUTTKAY 1995, 193f.), für die

Kosihy-Čaka/Makó-Gruppe nennt sie 15 Fundstellen (Ruttkay 1995, 199). Die Aussagefähigkeit der einzelnen Fundpunkte darf nicht überbewertet werden, da es sich häufig um Einzel- oder Lesefunde handelt. Darüber hinaus sind die Fundpunkte in Raum und Zeit ungleichmäßig verteilt. Grabfunde fehlen fast völlig. Für einige Gebiete Ostösterreichs ist nicht einmal eine konkrete, durch Funde belegte Aussage zur kulturellen Zugehörigkeit in einzelnen Zeitstufen möglich, geschweige denn Aussagen zur Typologie, Siedlungskunde oder Wirtschaftsweise.

Das Fehlen der Funde in Niederösterreich und dem Burgenland ist um so bedauerlicher, als diese beiden Gebiete – am Übergang zwischen den Ostausläufern der Alpen bzw. der böhmischer Masse und der Ungarischer Tiefebene liegend – Einflüsse unterschiedlicher Kulturen in sich vereint haben müssen und daher auch entscheidende Hinweise zur Parallelisierung der verschiedenen endneolithischen Kulturerscheinungen bieten könnten. Dazu kommt für das zentrale Niederösterreich die Anbindung Donau aufwärts an das süddeutsche Gebiet und Donau abwärts bis in den heute serbischen Raum. Letzteres gilt auch für das Burgenland mit seinen zur Donau führenden Flüssen.

Erfreulicherweise wurden der Jevišovice-Kultur in den letzten Jahren mehrere Untersuchungen gewidmet, was sowohl die Aufarbeitung von Altfunden (Lantschner 1990; Krenn-Leeb 1999) als auch neue Grabungen mit teilweise sensationellen Ergebnissen betrifft (Krenn-Leeb 2001, 558ff.; Krenn-Leeb 2002, 31f.). Auch bei Grabungen mit zeitlich anderer Fragestellung werden immer wieder Funde der Jevišovice-Kultur gemacht [1]. Besonders im südlichen Niederösterreich häufen sich jetzt die Nachweise endneolithischer Besiedlung, wie z. B. im südlichen Wiener Becken [2]. Doch fehlen weiterhin größere, stratifizierte Fundkomplexe der Kosihy-Čaka/Makó-Gruppe, wenngleich bemerkt werden kann, dass Funde dieser Zeitstellung vermehrt bei Rettungsgrabungen festgestellt werden (z. B. Ziersdorf, MG Zierdorf, VB Hollabrunn; Hasenhündl 1998, 771 und Abb. 393-399; Hasenhündl 1999, 705, 708 und Abb. 296-297). Die Anzahl der Fundstellen der Jevišovice-Kultur dürfte nun auf die 60 zugehen, die der Kosihy-Čaka/Makó-Gruppe auf die 30.

Lediglich zur Lokalgruppe der Schnurkeramik des Unteren Traisentales mit ihren 100 Gräbern im Großraum Franzhausen kann die Fundlage als erfreulich bezeichnet werden, wenngleich mit der Einschränkung, dass bisher keine Siedlungen nachgewiesen werden konnten. Die bereits publizierten Gräber und ihr Inventar belegen die obigen Überlegungen zum Überschneidungsgebiet unterschiedlicher Kulturerscheinungen anhand von Einflüssen aus dem Bereich Kosihy-Čaka/Makó und Somogyvár-Vinkovci, durch Verbindungen zur Glockenbecher-Csepel-Gruppe und der Frühphase der Nagyrév Kultur, sowie ihre Beziehungen nach Bayern in Form des stempelverzierten Bechers vom Typ Geiselgasteig (Neugebauer-Maresch 1994, 29).

Für die Glockenbecherkultur in Niederösterreich und dem Burgenland können derzeit rund 65 Fundstellen angeführt werden. Zu den von Heyd zusammengestellten (Heyd 2000, 130 ff.) kommen noch eine Armschutzplatte aus Merkendorf, MG Schollach, VB Melk (Turetschek 1985, 230 und Abb. 88), ein einzelnes Bruchstück eines verzierten Glockenbechers aus Platt, VB Retz [3], eine Tasse aus Pulkau, SG Pulkau, VB Hollabrunn (Maurer / Puschnik 2002) und vom Oberleiserberg, MG Ernstbrunn, VB Korneuburg eine kleinen Armschutzplatte (Mitscha-Märheim / Nischer-Falkenhof 1929, Taf. II/18) und eine Silexpfeilspitze mit trapezförmig eingezogener Basis (Kern 1987, Taf. 15) [4].

Der überwiegende Teil der bekannten Fundstellen hat Einzelfunde oder Streufunde erbracht, die entweder im Zuge von Feldbegehungen aufgelesen oder in einigen wenigen Fällen sekundär verlagert, in Gruben anderer Zeitstellung angetroffen wurden. In ca. 30 Fällen wurden die Reste von Gräbern festgestellt. Siedlungen sind selten nachgewiesen. Die verzierten Becherscherben vom Föllik bei Großhöflein, VB Eisenstadt-Umgebung wurden im Bereich einer Höhensiedlung gefunden (Hetzer 1949, 90-92), bei der Grabungen in Laa an der Thaya/Ruhof konnten die Reste von Siedlungsstrukturen ausgegraben werden (Neugebauer 1981, 57-60) und in Schwechat, VB Wien-Umgebung stammt das Fundgut aus einer Siedlungsgrube (FÖ 18, 1979, 1980, 308, Abb. 172-182).

Relativchronologisch können vor allem die Nordniederösterreichischen Funde gut in das mährische

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[1] W. Neubauer danke ich für die Möglichkeit der Besichtigung neuer Funde von Schwarzenbach, MG Schwarzenbach, VB Wiener Neustadt.

[2] Freundliche Mitteilung T. Kühtreiber.

[3] Freundliche Mitteilung W. Neubauer und M. Fera.

[4] Da sich auf dem Oberleiserberg eine Siedlung der Frühbronzezeit befindet, könnten die oben angesprochenen Objekte auch in diesen Zusammenhang gehören.

Chronologiesystem eingebunden werden, darüber hinaus weisen sie zahlreiche Parallelen mit den ungarischen Funden auf. Im Gebiet entlang der Donau sind die Einflüsse aus dem süddeutschen Raum stärker spürbar. Eine Zusammenfassung des Forschungsstandes und eine Gliederung der Glockenbecherfunde in Ostösterreich brachten die beiden Arbeiten von Neugebauer und Neugebauer-Maresch, in denen sie die Stufengliederung der Glockenbecherkultur und der Anfänge der Bronzezeit, wie sie Bertemes und Heyd (Bertemes / Heyd 1996) vorgeschlagen haben, teilweise berücksichtigten, teilweise kritisch hinterfragten (Neugebauer / Neugebauer 1998, 307-324; Neugebauer / Neugebauer-Maresch 2001). Auch Heyd widmete in seiner umfassenden Arbeit über die Spätkupferzeit in Süddeutschland den österreichischen Funden breiten Raum (Heyd 2000, 358-473).

Nachdem sich die internationale Glockenbecherforschung in den letzen Jahrzehnten mehr mit den Fragen *wer* und *wann* beschäftigte und sich daraus zwangsläufig die Suche nach den Trägern dieser „Kultur”, dem Entstehungsort als räumlich definierter Bereich und der Entstehungs- und Ausbreitungszeit in absoluten Daten ergeben hat, muss festgestellt werden, dass uns dieser Zugang nur wenige Schritte bei der Erklärung des „Glockenbecher Phänomens“ weiter gebracht hat. Die Wichtigkeit der Arbeiten zur chronologischen Gliederung soll mit dieser Aussage aber auf keine Fall geschmälert werden, stellen sie doch die Basis für alle weiteren Überlegungen dar. Jetzt ist es an der Zeit, auch nach dem *Warum* und dem *Wie* zu fragen.

Warum also, erlebt der Becher am Ende des Neolithikums eine derartige Blüte und wird noch dazu mit Mustern verziert, die ihre Herkunft aus dem Bereich der textilen Produktion nicht verleugnen können?[5]

Die Verbindung zu den textilen Handwerkstechniken werden einerseits durch Schnurabdrücke, andererseits durch die in „Borten” angeordneten Muster hergestellt. Als einfachste Erklärung wäre anzubieten, dass die Herstellung, sowohl der Textilien, als auch der Töpfereiprodukte durch dieselbe Personengruppe erfolgte und sowohl Geräte (z. B. Kämme) als auch Motive (z.B. Zick-zack-Band) in beiden Materialgruppen Verwendung fanden. Die Stelen von Sion (Gallay 1995, Fig. 9-11) zeigen ebenfalls die Verwandtschaft der Muster und Motive auf den Textilien und den Bechern. Die „Borten” der Glockenbecherverzierung werfen auch die Frage auf, ob sie nicht als Reaktion auf die textile Technik des Brettchenwebens gewertet werden müssen. Leider haben wir für den betreffenden Zeitraum keinen Nachweise von Brettchengeweben. Die Brettchen, in den meisten Fällen aus Holz, steifem Leder oder Knochen (Grömer 2001, 51) blieben, mit Ausnahme der keramische „Brettchen” von Penedo, einem kupferzeitlichen Fundort Portugals (Spindler 1969, Abb. 25-27) ebenfalls nicht erhalten. Aber auch im Fundgut jener Zeiten, die durch Textilreste belegt, die Brettchenweberei kannten, stellen Webbrettchen eine Seltenheit dar. Dass sich die oben erwähnten Tonplättchen für die Herstellung von Geweben eigneten, konnte in Versuchen gezeigt werden (Grömer 2001, 55).

Wie wurden die Gefäße hergestellt und wie die Muster auf die Glockenbecher aufgebracht?

Erstaunlich erscheint, dass gerade für eine Zeitstufe, die oft mit Bevölkerungsverschiebungen und einem „reisig Volk von Bogenschützen“ in Verbindung gebracht wurde, die petrographischen Untersuchungen der Keramik weitgehend fehlen, die Frage nach „Import” oder Produktion der Keramik an Ort und Stelle also bisher unbeantwortet ist. Ebenso fehlen Untersuchungen zur Keramiktechnologie, was nicht nur unsere Kenntnisse über die Herstellung der unterschiedlichen Gefäße beeinträchtigt, sondern auch unsere Möglichkeiten zur Erstellung einer Typologie die stilistische, formale und technologische Merkmale berücksichtigt [6] .

Obwohl immer wieder von Schnurabdrücken, Stempeln und Zahnstock die Rede ist, gibt es nur wenige genaue Analysen der Verzierungen und unterschiedlichen Verzierungstechniken. Einerseits fehlen die Funde von Werkzeugen zur Keramikverzierung, wenn wir von einem Knochengerät aus Marktbergel, Landkreis Neustadt a. d. Aisch – Bad Windsheim absehen (Nadler 1998, Abb. 27), andererseits aber auch Experimente, die sich mit der Herstellung der Glockenbecherverzierungen beschäftigen. Für Österreich existiert nur im Zusammenhang mit der mittelbronzezeitlichen „Litzenkeramik” eine kleine Versuchsreihe von Schnur- bzw. Litzenabdrücken (Neugebauer 1976, Taf. 6:3).

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[5] Bisher hat nur Kreiner bei seiner Beschreibung der Glockenbechers aus Trieching Grab 1 die Ähnlichkeit mit textilen Mustern erwähnt: „...sieben breitere Bänder, deren Verzierungen aus einem engen Geflecht von sehr kleinen Rollstempel-Eindrücken in Art eines Textilabdruckes besteht” (Kreiner 1991, 154).

[6] Siehe zum Einbeziehen technologischer Merkmale in die typologische Bearbeitung D. Vorlauf 1991 und 1999.

Warum werden Pfeil und Bogen zu dieser Zeit so wichtig, dass sie sogar Toten mit ins Grab gegeben werden?

Vermutlich gab es eine technologische Verbesserung des Bogens, welche die Schnellkraft der Sehne erhöhte und die Verwendung von Armschutzplatten notwendig machte. Geübte Bogenschützen weisen darauf hin, dass Verletzungen des Unterarms durch die zurückschnellende Bogensehne umso seltener sind, je besser die Technik des einzelnen Schützen ist. Trotzdem gehörte prunkvoller Unterarmschutz in den bogenschießenden Kulturen, auch der späteren Zeiten, stets zu den Prestigeobjekten. Weiters stellt sich die Frage, ob Pfeil und Bogen im Endneolithikum eher als Jagdwaffe oder Kriegsgerät gesehen werden müssen oder ob ihre kultisch-rituellen Aspekte dazu geführt haben, dass sie ins Grab mitgegeben wurden. Die Wichtigkeit des Bogens für den Mann, oder vielleicht besser für bestimmte Männer, jener Zeit wird jedenfalls durch die Darstellungen auf den Stelen von Sion (z. B. Gallay 1995, Fig. 9 und 10) unterstrichen.

Aus Ostösterreich kennen wir Armschutzplatten unterschiedlicher Form aus endneolithischen Gräbern, einzelne Stücke die möglicherweise aus zerstörten Gräbern stammen und auch Streufunde von in unterschiedlichen urzeitlichen Zeitperioden benutzen Siedlungsarealen – meistens Höhensiedlungen.

Festgehalten sei hier, dass auch die Silexpfeilspitzen, die zu jener Zeit in Europa verwendet und in Gräber mitgegeben werden nur eine scheinbare Gleichförmigkeit der Ausstattung vermitteln, reichen ihre Typen doch von gestielten, über Stücke mit schwach eingezogenen Basis bis zu Exemplaren mit trapezförmiger Ausnehmung, ganz abgesehen von den unterschiedlichen Silexmaterialien die bei ihrer Produktion Verwendung fanden. Silexpfeilspitzen sind in Österreich hauptsächlich als Streufunde von den unterschiedlichsten Fundorten bekannt. Eine kulturelle Zuordnung ist in den meisten Fällen nicht mit Sicherheit möglich. Untersuchungen zu den verwendeten Silexmaterialien und zur Herstellungstechnik wären daher sehr wünschenswert, um eventuell vorhandene Unterschiede festzustellen und möglicherweise Gruppen mit unterschiedlicher Zeitstellung herausarbeiten zu können. Herstellungs- und Schussversuche, wie es sie für Horgener Spitzen (Kelterborn 2000) gibt, könnten uns dabei helfen einige der technologischen Fragen zu beantworten.

Warum werden Frauen und Männer am Ende des Neolithikums im östlichen Mitteleuropa verschieden orientiert bestattet?

Die Sitte der bipolaren geschlechtsspezifischen Orientierung der Bestatteten wirft die Frage nach dem Entstehungsort, der Entstehungszeit und letztlich auch nach den soziologischen Hintergründen dieser unterschiedlichen Bestattungsweise auf. Obwohl die bipolare geschlechtsspezifische Orientierung in Mitteleuropa mit der Schnurkeramik und den Glockenbechern in Verbindung gebracht wird, zeigt nicht ein Blick nach Norden oder Westen, sondern ein Blick nach Südosten, woher diese Sitte und das dazugehörige Gedankengut stammen könnte. Bereits in kupferzeitlichen Kulturen Ungarns wurden Frauen und Männer unterschiedlich orientiert bestattet (Nevizánsky 1984, 266). Kontinuität seit dieser Zeit ist nicht nachweisbar. In Ostösterreich ist die bipolare geschlechtsspezifische Orientierung ab dem Endneolithikum belegt.

Diese Bestattungssitte könnte Ausdruck von Gleichwertigkeit, im Sinne von zwei entgegengesetzten sich aber ergänzenden Lebenswelten sein oder Ausdruck der Einseitigkeit im Sinne geschlechtspezifischer Bestattungstabus.

Warum werden einige der Toten verbrannt und warum gibt es sowohl Brandschüttung- als auch Urnengräber? Unterscheiden sie sich in ihrer Ausstattung? Gibt es Unterschiede zu den Körpergräbern?

In Ostösterreich liegt der Anteil der Brandbestattungen – bei den für diese Belange auswertbaren Gräbern – knapp unter 30%, wobei hier die Gräber aller Stufen zusammengefasst sind. Für die Altfunde kann meist nur zwischen Körpergrab und Brandgrab unterschieden werden, eine Gliederung der Brandgräber in Urnen- und Brandschüttungsgräbern ist meist nicht möglich. Auch im 1985 freigelegten Gräberfeld von Zwingendorf war in einzelnen Fällen keine gesicherte Aussage ob Urnen- oder Brandschüttungsgrab möglich, da die Brandbestattungen durch ihre seichte Lage bereits stark durch Ackertätigkeit gestört waren (Kern 2001, 310).

Unterschiedliche Ausstattung lässt sich bisher nicht feststellen, wenn man davon absieht, das in den Brandgräbern die sonst eher seltenen Amphoren vorkommen, die dann meist als Leichenbrandbehälter dienen. Die Verwendung dieser Gefäße scheint also durch praktische und nicht durch ideologische Gründe erklärbar zu sein.

In der Glockenbecherkultur Ostösterreichs treten Brandbestattungen bereits in Gräbern, mit den ältesten Inventaren, wie Laa an der Thaya, Grab 8 (Torbiser 1976, 30 und 33ff.) auf. Insgesamt gesehen nimmt die Häufigkeit der Brandbestattungen vom Karpatenbecken ausgehend in Richtung Nordwesten beständig ab (Kern 2001, 312 und Turek 2001, 221).

Die Tradition der Körpergräber ist in unserem Raum gut belegt durch die Bestattungen der Schnurkeramik, wenngleich diese vereinzelt auch die Brandbestattung pflegt. Die Tradition der Brandgräber ist für den ostösterreichischen Raum schlecht belegbar durch die Bestattungen der Jevišovice-Kultur – z.B. die beiden Gräber aus Thunau/Kamp (RUTTKAY 1992, 281 ff.) und die Kosihy-Čaka-Gruppe – bisher kennen wir in Ostösterreich lediglich ein mögliches Brandgrab aus Schwechat (RUTTKAY 1995a, 353-356) – und die wenigen oben schon erwähnten Brandgräber der Schnurkeramik. Die Brandbestattung, meist in Form des Brandschüttungsgrabes, stellt in der Kosihy-Čaka-Gruppe fast die einzige Bestattungsart dar. Wir werden daher nicht fehlgehen, falls wir den ostniederösterreichisch-nordburgenländischen Raum zu ihrem Verbreitungsgebiet zählen, auch hier Brandbestattungen vorauszusetzen.

Somit gibt uns die Bestattungsart, besonders in der Form des Brandschüttungsgrabes, Hinweise auf die Wurzeln und Traditionen der endneolithischen Kulturen mit Glockenbecher im ostösterreichischen Raum.

Warum wurde (und wird) die unverzierte Keramik dieser Zeitstellung als Begleitkeramik bezeichnet? Ist der Terminus Komplementärkeramik besser?

Erklärbar wird die Bezeichnung Begleitkeramik aus der Forschungsgeschichte. Ausgehend von den auffälligen Glockenbechern war es nur verständlich, dass die im Vergleich dazu eher unscheinbare, meist un- oder weniger verzierte Keramik nur als „Begleiter“ der Glockenbecher gesehen wurde. Im äußersten Osten des Verbreitungsgebietes der Glockenbecher ist sie jedoch Ausdruck des endneolithische Substrats. R. Kalicz-Schreiber wies im Bezug auf die Glockenbecher-Csepel-Gruppe auf den starken lokalen Charakter verschiedener Keramiktypen hin (KALICZ-SCHREIBER 1997, 336). M. Besse konnte in neuen Untersuchungen auch für andere Gebiete die starke Bindung der common ware/ceramique regional an die endneolithischen Traditionen aufzeigen (BESSE 2002). In Niederösterreich stellen vor allem die Töpfe und Henkeltöpfe Verbindungen zu den vorangehenden regionalen Kulturen her. Auch in der Glockenbecherkultur in Mähren sind sie reichlich vertreten, hauptsächlich in Gräbern mit rechten Hockern (DVOŘÁK 1989, 201). Die mährische Forschung bezeichnet diese Henkeltöpfe als Kannen. Heyd bringt die beiden Henkelgefäße aus Gemeinlebarn-Mitte Verfärbung 3559 „in Verbindung zu balkanischen Krugformen und dem keramischen Inventar des Makó/Kosihy-Čaka- und Somogyvár-Vinkovci-Kulturkreis”. Er sieht in ihnen keine reguläre „Begleitkeramik” (HEYD 2000, 373). Das ist richtig- ausgehend von süddeutschen Verhältnissen. Im ostösterreichisch-mährischen Raum gehören diese Töpfe und Kannen zum Formenspektrum jener einheimischer Keramik, mit der auch Glockenbecher vergesellschaftet sein können. Gerade diese Unterschiede im Inventar belegen die regionale Prägung der sogenannten Begleitkeramik. Insofern wäre also die Bezeichnung regionale Ware den Begriffen Begleitkeramik und Komplementärkeramik vorzuziehen, da die betreffenden Gefäßformen weder den Glockenbecher „begleiten” noch ihn „ergänzen” sondern Ausdruck einer regionalen Entwicklung sind.

Bleibt letztlich noch die Frage, warum uns scheinbare Gleichförmigkeiten einiger Aspekte der materiellen Kultur solange den Blick auf tatsächliche Unterschiedlichkeiten der einzelnen Regionen verstellten?

Literatur

BERTEMES F. / HEYD V. 1996. Définition et origine de l'âge du Bronze ancien en Europe centrale. In: MORDANT C. / GAIFFE O. (Hrsg.), *Cultures et sociétés du Bronze ancien en Europe. Actes du 117e Congrès national des sociétés hist. scient., 27 - 29 octobre 1992*, 13–36. Clermont-Ferrand.

BESSE M. 2002. Bell Beaker common ware in continental Europe: Current state of research. In: *The Northeast Frontier of Bell Beakers, 26-29 May 2002 Poznań, Poland. Abstract Book*, 22–23. Poznań.

DVOŘÁK P. 1989. Die Glockenbecherkultur in Mähren. In: *Das Äneolithikum und die früheste Bronzezeit (C^{14} 3000- 2000 b.c.) in Mitteleuropa: kulturelle und chronologische Beziehungen.* Praehistorica 15, 201–205.

GALLAY A. 1995. Les stèles anthropomorphes du site mégalithique du Petit-Chasseur à Sion (Valais, Suisse). In: S. CASINI / R.C. DE MARINIS / A. PEDROTTI (Hrsg.), *Statue-stele e massi incisi nell'europa dell'età del rame*, Notizie Archeologiche Bergomensi 3, 167–194.

GRÖMER K. 2001. Brettchenweberein aus dem Salzbergwerk in Hallstatt. In: GRÖMER K. / LÖCKER K. / MEHOFER M. (Hrsg.), *Experimentelle Archäologie. Einen Versuch ist es wert.* Archäologie Österreichs 12, Sonderausgabe, 49–58.

HASENHÜNDL G. 1998. *Fundberichte aus Österreich* 36, 1997, 771 und Abb. 393–399.

HASENHÜNDL G. 1999. *Fundberichte aus Österreich* 37, 1998, 705, 708 und Abb. 296, Abb. 297

Hetzer K. 1949. Beiträge zur Kenntnis der Glockenbecherkultur in Österreich. *Archaeologia Austriaca* 4 , 87–115.

Heyd V. 2000. *Die Spätkupferzeit in Süddeutschland. Untersuchungen zur Chronologie von der ausgehenden Mittelkupferzeit bis zum Beginn der Frühbronzezeit im süddeutschen Donaueinzugsgebiet und den benachbarten Regionen bei besonderer Berücksichtigung der keramischen Funde*. Saarbrücker Beiträge zur Altertumskunde 73.

Kalicz-Schreiber R. 1997. Die Somogyvár-Vinkovci-Kultur und die Glockenbecher in Ungarn. In: Fritsch B. / Maute M. / Müller J. / Wolf C. (Hrsg.), *Tradition und Innovation, Prähistorische Archäologie als historische Wissenschaft, Festschrift für Christian Strahm*. Internationale Archäologie, Studia Honoria 3, 325–347. Rahden/Westf..

Kelterborn P. 2000. Analysen und Experimente zu Herstellung und Gebrauch von Horgener Pfeilspitzen. *Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte* 83, 37–64.

Kern A. 1987. Die urgeschichtlichen Funde vom Oberleiserberg, MG. Ernstbrunn. Die unstratifizierten Bestände aus Privatsammlungen, Bundes-, Landes- und Heimatmuseen. Ungedr. Diss. Wien 1987.

Kern D. 2001. Endneolithisches Gräberfeld mit Glockenbechern von Zwingendorf/Alicenhof, VB Mistelbach, Niederösterreich. *Archaeologia Austriaca* 84–85, Festschrift für Egon Reuer, 307–328. Wien.

Kreiner L. 1991. Neue Gräber der Glockenbecherkultur aus Niederbayern. *Bayerische Vorgeschichtsblätter* 56, 151–161.

Krenn-Leeb A. 1999. Die Fazies Spielberg als Mittler zwischen der älteren und jüngeren Jevišovice-Kultur in Niederösterreich? Neue Erkenntnisse zum älteren Abschnitt des Endneolithikums. *Mitteilungen der Anthropologischen Gesellschaft in Wien* 129, 45–67.

Krenn-Leeb A. 2001. *Fundberichte aus Österreich* 39, 2000, 558ff .

Krenn-Leeb A. 2002. Kleiner Anzingerberg – Ein erster Vorbericht der Hauptbesiedlungsphasen, *Archäologie Österreichs* 13/1, 31–32.

Lantschner M. 1990. Spätneolithische Siedlungsfunde aus Oberthürnau, Gem. Drosendorf-Zissersdorf, VB Horn, Niederösterreich. *Archaeologia Austriaca* 74, 1–32.

Maurer H. / Puschnik H. 2002. Ein glockenbecherzeitliches Gefäß von Pulkau. *Archäologie Österreichs* 13/1, 22–23.

Mitscha-Märheim H. / Nischer-Falkenhof E. 1929. Der Oberleiserberg. Ein Zentrum vor- und frühgeschichtlicher Besiedlung. *Mitteilungen der Prähistorischen Kommission* 2/5, 391–438.

Nadler M. 1998. Kein „reisig Volk von Bogenschützen"! – Ein Siedlungskomplex der Glockenbecherkultur aus Marktbergel. *Das archäologische Jahr in Bayern* 1997, 61–62.

Neugebauer C. / Neugebauer J.-W. 1997. Zum Forschungsstand der Glockenbecher in Ostösterreich. In: Fritsch B. / Maute M. / Müller J. / Wolf C. (Hrsg.), *Tradition und Innovation, Prähistorische Archäologie als historische Wissenschaft, Festschrift für Christian Strahm*. Internationale Archäologie, Studia Honoria 3, 307–324. Rahden/Westf.

Neugebauer J.-W. 1976. Das „Litzenverzierte" Krüglein von Dürnkrut, p.B.Gänserndorf, NÖ. Forschungen in Stillfried 2. *Veröffentlichungen der Österreichischen Arbeitsgemeinschaft für Ur- und Frühgeschichte* 9, 24–30.

Neugebauer J.-W. 1981. Glockenbecherfunde im Raum Laa a. d. Thaya, Niederösterreich. *Archaeologia Austriaca* 65, 53–61.

Neugebauer J.-W. / Neugebauer-Maresch C. 2001. Bell Beaker Culture in Austria. In: F. Nicolis (Hrsg.) *Bell Beakers today. Pottery, people, culture symbols in prehistoric Europe*, vol. II, 429–437. Trento.

Neugebauer-Maresch C. 1994. Die Lokalgruppe der Schnurkeramik des Unteren Traisentales. In: J.-W. Neugebauer, *Bronzezeit in Ostösterreich*. Wissenschaftliche Schriftenreihe Niederösterreich 98/99/100/101, 23–35.

Nevizánsky G. 1984. Sozialökonomische Verhältnisse in der Polgár-Kultur aufgrund der Gräberfeldanalyse. *Slovenská Archeológia* 32-2, 263–310.

Ruttkay E. 1992. Zwei endneolithische Brandgräber aus Gars am Kamp, Thunau, VB Horn, Niederösterreich. Beitrag zur Gräberkunde des Endneolithikums. *Balcanica* 23, Festschrift für N. Tasič, 281–295.

Ruttkay E. 1995. Spätneolithikum. In: Lenneis E. / Neugebauer-Maresch C. / Ruttkay E., *Jungsteinzeit im Osten Österreichs*. Wissenschaftliche Schriftenreihe Niederösterreich 102/103/104/105, 108–203.

Ruttkay E. 1995a. Ein Brandgrab der Kosihy-Čaka-Makó-Gruppe und die „Meßbecher" der Wieselburger Kultur von Schwechat, Niederösterreich. *Fundberichte aus Österreich* 33 (1994), 353–356.

Spindler K. 1969. Die kupferzeitliche Siedlung von Penedo/Portugal. *Madrider Mitteilungen* 10, 45–116.

Toriser A. 1976. Funde der älteren Glockenbecherkultur aus Laa a. d. Thaya, p. B. Mistelbach, NÖ. *Archaeologia Austriaca* 59/60, 29–41.

Turek J. 2001, Late Eneolithic Mortuary Practices and their Social Significance. In: Biehl P. F. / Bertemes F. / Meller H. (Hrsg.), *The Archeology of Cult and Religion*. Archaeolingua 13, 219–234. Budapest.

Turetschek F. 1985. *Fundberichte aus Österreich* 23 (1984-1985), 230 und Abb. 88.

Vorlauf D. 1991. Die technisch-typologische Methode. Anmerkungen zu Charakter und Aussagekraft der Experimentellen Archäologie im Hinblick auf Handwerk und Technik. Experimentelle Archäologie in Deutschland. *Archäologische Mitteilungen in Nordwestdeutschland*, Beiheft 6, 83–90.

Vorlauf D. 1999. Die technisch-typologische Methode. Der Darwinismus und die Erforschung der Kulturgeschichte. In: Jerem E. / Poroszlai I. (Hrsg.), *Archaeology of the Bronze and Iron Age – Environmental Archaeology, Experimental Archaeology, Archaeological Parks. Proceedings of the International Archaeological Conference Százhalombatta, 3-7 October 1996*. Archaeolingua 9, 207–213. Budapest.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

Die Glockenbecherkultur im Kontext der kulturhistorischen Entwicklung in der Südwestslowakei

Jozef Bátora, Klára Marková, Jozef Vladár (Nitra, Slowakei)

Trotz der besonderen Aufmerksamkeit, die der Problematik der Glockenbecherkultur (GBK) im letzten Jahrzehnt gewidmet wurde, fehlt eine komplexere Information über diese Kultur im Gebiet der Slowakei, wo sie eine der an der Formung der beginnenden Bronzezeit beteiligte Kultur war. Ein unmittelbares Kontaktgebiet mit weiterem Gebiet der GBK war namentlich die Záhorie – Region, also jener Teil der Slowakei, der außerhalb der Region des eingentlichen Karpatenbeckens liegt. Sie ist im Osten vom Gebirge der Kleinen Karpaten, im Südwesten von den Flüssen March und Donau umgrenzt. Vor allem auf diesem Gebiet ist das Vorkommen der GBK zur Zeit ihrer älteren Entwicklungsphase, d.h. während der Existenz der klassischen Glockenbecher belegt. Die Fundstellen der GBK sind nach dem gegenwärtigen Forschungsstand verhältnismäßig konzentriert in der Zone des nordwestlichen Záhorie-Gebietes bei den Furten unweit der March dokumentiert (Abb. 1: Skalica, Kátov, Kopčany, Vrádište, Radimov) und die enzige exzentrisch im Nordosten situierte Fundstelle ist Ľuborča im mittleren Waagtal (Abb. 1:5; 2:3,6,8, 10,12,13; Pichlerová 1971, 65 ; Vančo 1998, 163, Abb. 116:1,2; Bátora 1984, 34; Drahošová 1997, 10; Budinský-Krička 1932, 59-60.

In der jüngeren, bzw. späten Entwicklungsphase erscheinen Fundstellen der GBK bereits verstreuter auf einem größeren Gebiet im Rahmen der Südwestslowakei. Davon zeugen nicht nur die in der Záhorie-Region sich erstreckenden Fundstellen, sondern auch

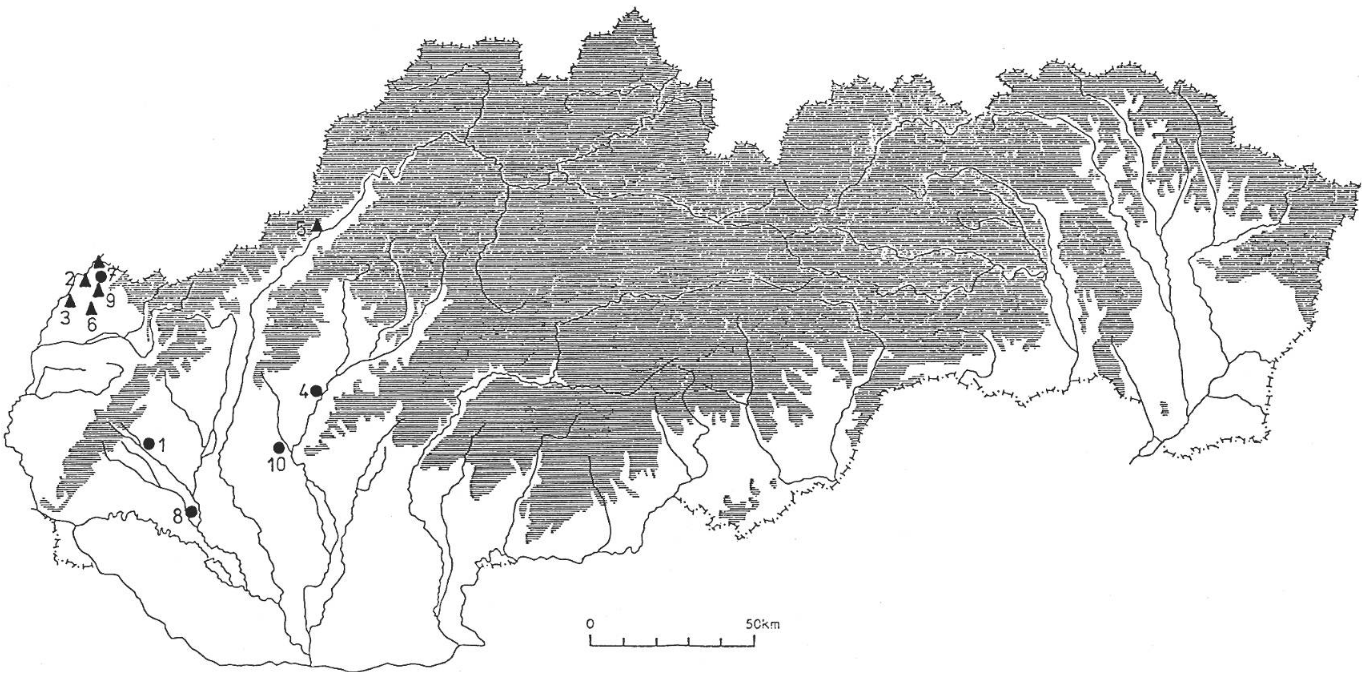

Abb. 1. Verbreitung der GBK in der Slowakei. Klassischen Glockenbecher (Dreiecke): 2 – Kátov, 3 – Kopčany, 5 – Ľuborča, 6 – Radi mov, 7 – Skalica, 9 – Vrádište. Sog. Begleitkeramik (Punkten): 1 – Jablonec, 4 – Ludanice - Mýtna Nová Ves, 7 – Skalica, 8 – Sládkovičovo, 10 – Zbehy.

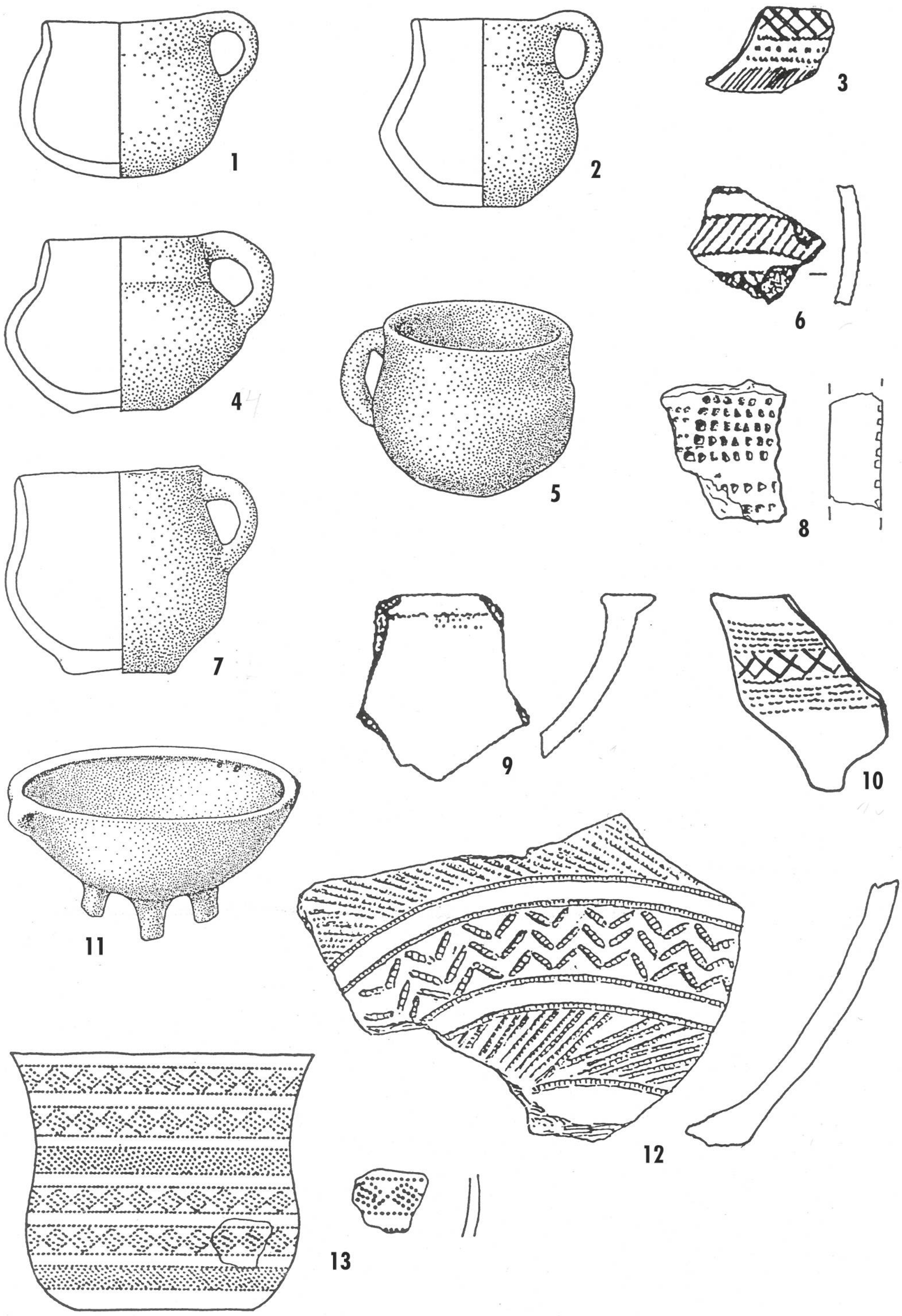
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Abb. 2. Begleitkeramik der GBK: 1, 2, 4, 7 – Skalica; 5 – Jablonec; 11 – Sládkovičovo. Fragmente von klassischen Glockenbechern: 3, 10 Ľuborča; 6, 9 – Kátov; 12 – Kopčany; 8 – Radimov; 13 – Vrádište.

im karpatischen Teil der Südwestslowakei bis zum Fluss der Nitra, bzw. Gran (Abb. 1: Skalica, Sládkovičovo, Jablonec, Zbehy, Ludanice-Mýtna Nová Ves). Diese jüngere Entwicklungsetappe der GBK ist namentlich durch sog. Begleitkeramik repräsentiert (Abb. 2:1,2,4,5,7,11; Pichlerová 1971, Abb. 1,66; Vladár 1969, Abb. 4; Vladár 1976, Abb. 2.; Budinský-Krička 1965, 64, Taf. VIII: 8,9).

Außer den angeführten zwei Grundformen der Keramik erscheinen in Gebiet der Südwestslowakei auch weitere Artefakte, die für die GBK charakteristisch sind und sie erweitern das Bild über ihre Verbreitung in der untersuchten Region beträchtlich (Abb. 3). In erster Linie sind die Armschutzplatten mit vier Löchern, die auf vier Fundstätten vorgekommen sind (Abb. 3: Kátov, Veselé - 2 Exemplare, Ivanovce und Sikenica) zu erwähnen. Das Exemplar aus Kátov (Abb. 4:8) in der Region des slowakischen Marchgebietes, wurde schon zuvor erwähnt und seine Bindung an die GBK ist ohne Zweifel. Die zwei Armschutzplatten aus Veselé und die Armschutzplatte aus Ivanovce (Abb. 4:7) stammen zwar aus Arealen bekannter befestigter Siedlungen der Maďarovce-Kultur (Točík 1964, Taf. LIV:2; Bača 1999, Abb. 1, 15; Bača / Bartík / Farkaš 2000, Abb. 1:3), doch vermuten wir, dass man sie trotzdem nicht mit dieser Besiedlung verknüpfen kann, sondern mit dem Vordringen der GBK in das untere und mittlere Waagtal. Die Armschutzplatte aus Sikenica (vorher Veľký Pesek) im unteren Grantal stammt aus einem Skelettgrab (Mitscha-Märheim 1924, Abb. 2: 16). Ungeachtet dessen, dass sich auf ihren beiden Enden sogar drei Befestigungslöcher befinden, kann man sie ebenfalls mit den Trägern der GBK verknüpfen. Einer solchen Gestaltung der Armschutzplatten begegnen wir in der GBK verhältnismäßig häufig; davon zeugen z. B. Funde aus Gräbern in Stehelčevěs und Praha-Krč in Mittelböhmen in Svobodné Dvory in Ostböhmen, Předmostí in Mähren (Hájek 1957, Abb. 11:1,2; Hájek 1961, Abb. 1:5; Hájek 1966, Abb. 2:3, 8:2), aber auch von der Csepel-Gruppe in Ungarn, z. B. auf der Lokalität Budapest-Békásmegyer (Kalicz-Schreiber / Kalicz 1998, Abb. 7:3), die zum Fund in Sikenica geographisch am nächsten liegt. Für die Datierung der Armschutzplatte aus Sikenica in die GBK spricht auch die wichtige Tatsache, dass auf derselben Fundstelle ein Siedlungsobjekt, mit Keramik, die nahe der Begleitkeramik der GBK liegt, entdeckt wurde.

Ein weiteres für die GBK charakteristisches Artefakt sind die Silexpfeilspitzen mit einem Dorn in der Basis, die in der Südwestslowakei in drei Fundorten festgestellt wurden (Abb. 3: Abrahám, Vozokany und Zohor). Im Falle von Abrahám und Zohor handelt es sich um Funde aus Skelettgräbern (Kraskovská / Studeníková 1996, Abb. 2). Das Grab 95 in Abrahám enthielt außer einer Silexpfeilspitze mit Dorn noch eine weitere trianguläre Silexpfeilspitze. Eine ähnliche Kombination zweier Pfeilspitzen stellte man auch im

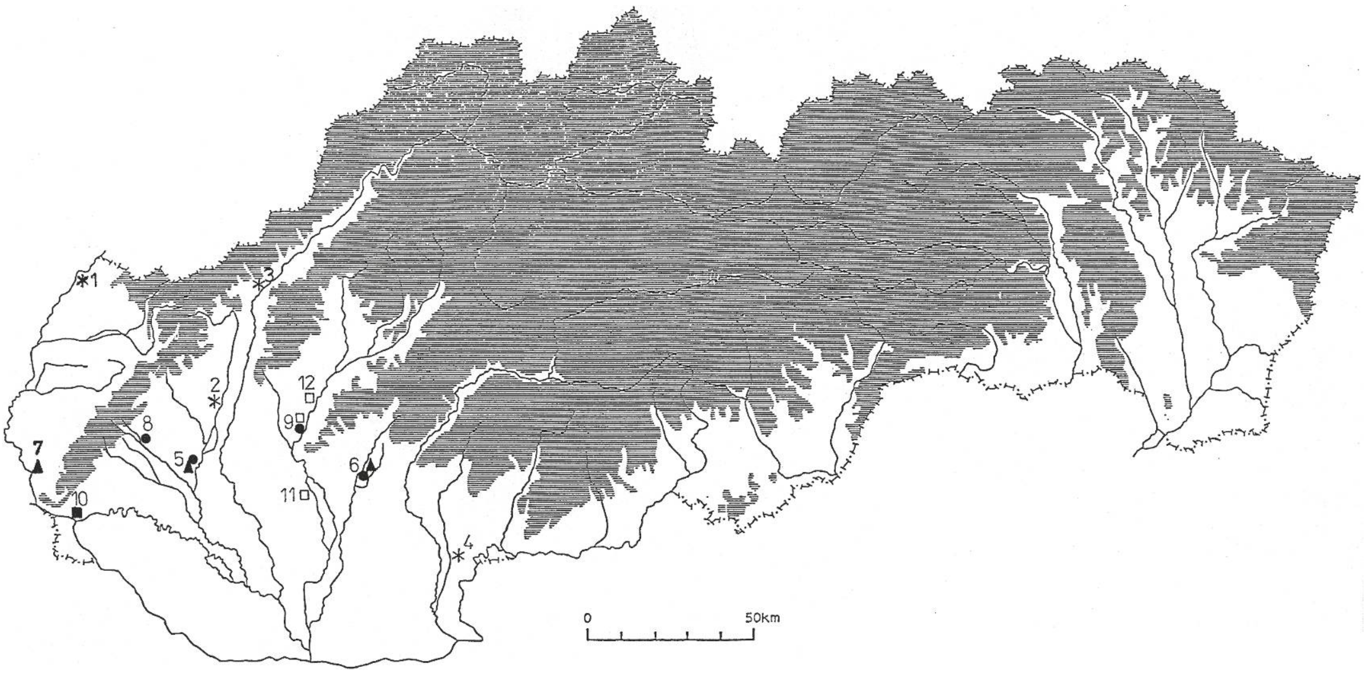

Abb. 3. Begleitende Material der GBK. Armschutzplatten (Stärchen): 1 – Kátov, 2 – Veselé, 3 – Ivanovce, 4 – Sikenica. Silexpfeilspitzen (dreieckige Punkte): 5 – Abrahám, 6 – Vozokany, 7 – Zohor. „Scheibenformigen“ Knochenanhänger (schwarze Punkte): 5 – Abrahám, 8 – Jablonec, 6 – Vozokany, 9 – Výčapy-Opatovce. Diadem (rechteckige Punkte): 10 – Bratislava? Weiter lebendiges Material (leere rechteckige Punkte): 9 – Výčapy-Opatovce, 11 – Branč, 12 – Ludanice-Mýtna Nová Ves.

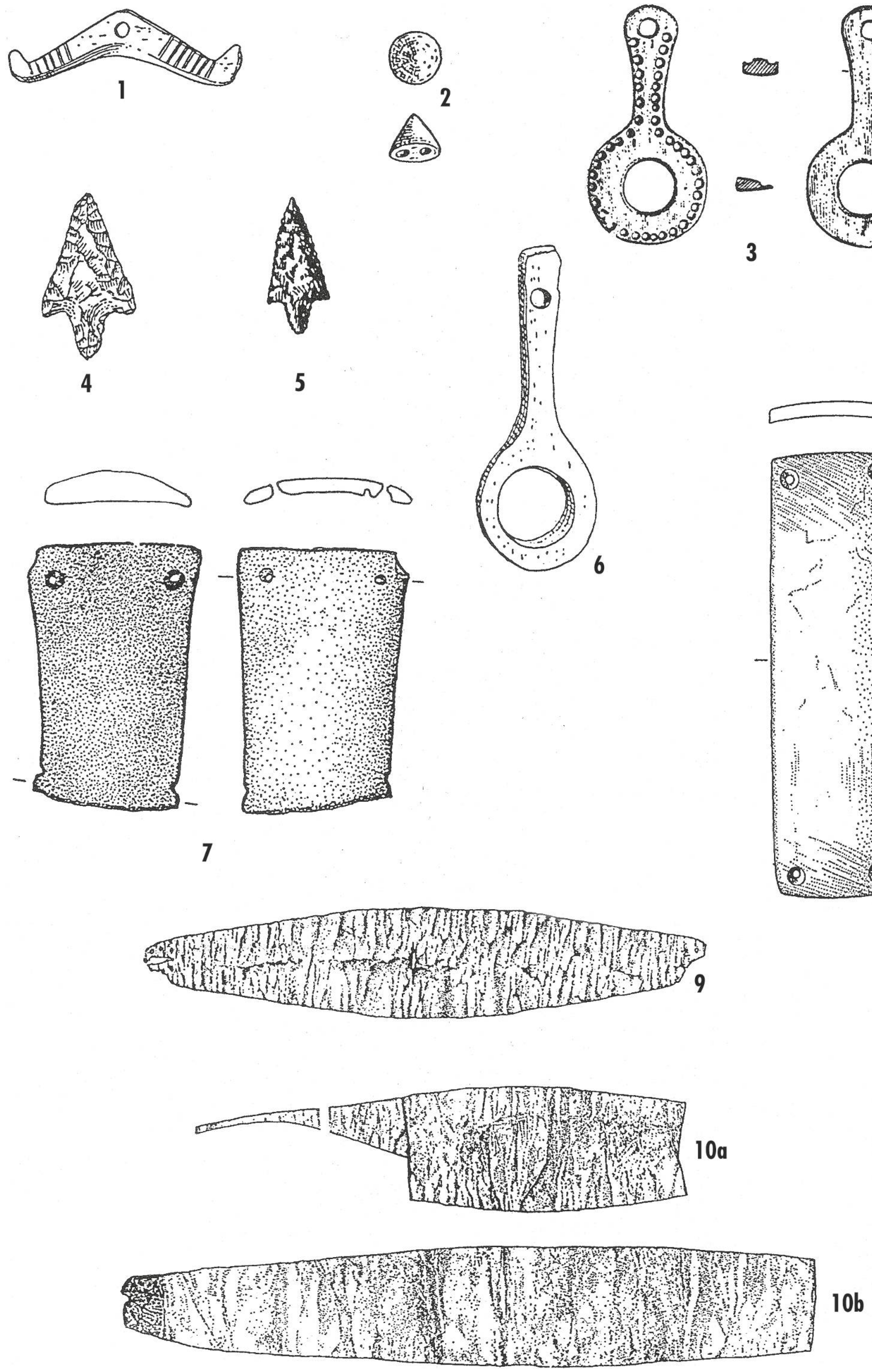

Abb. 4. Verschiedene Artefakte der GBK. 1 – Branč (Gr. 142); 2 – Výčapy-Opatovce (Gr. 239); 3 – Jablonec; 4 – Vozokany –„Reméz“; 5 – Zohor; 6 – Výčapy-Opatovce; 7 – Ivanovce; 8 – Kátov; 9 – Bratislava ?; 10a,b – Cicere (Spanien).

Grab 1/78 in Zohor fest (Abb 4:5). Die Silexpfeilspitze aus Vozokany (Abb. 4:4) gewann man als Lesefund auf einer Sanddüne in der Lage Reméz und stammt ebenfalls mit größter Wahrscheinlichkeit aus einem gestörten Grab.

Auch die scheibenförmigen Knochenanhänger mit zentralem Loch und verlängertem Hängeteil, der ebenfalls mit einem kleinen Loch versehen ist, sind Verknüpfbar mit der GBK. Sie stammen aus vier Fundstelen im untersuchten Raum (Abb. 3: Abrahám, Jablonec, Vozokany und Výčapy-Opatovce). Im Falle der ersten drei Fundstellen handelt es sich um unstratifizierte Funde von Lesefundcharakter (Točík / Lichardus 1964, 247-250, Abb. 4:6; Pichlerová 1968, 352, Abb. 1; Chropovský 1968; Točík / Budinský-Krička 1987, 70, Abb. 6). Lediglich das Exemplar aus Výčapy-Opatovce (Abb. 4:6) fand man während der Abdeckung des frühbronzezeitlichen Gräberfeldes, doch wird es mit dem neolithischen Objekt Nr. 3 in Zusammenhang gebracht, das vom jüngeren Grab Nr. 314 gestört war. Es ist wahrscheinlich, dass der Anhänger aus dem angeführten Grab stammt. Den Anhänger aus Jablonec (Abb. 4:3) entdeckte man unweit des Fundes zweier, der Begleitkeramik der GBK nahestehenden Tassen. Das Exemplar aus Vozokany stammt aus dem Raum der Sanddüne Homokdomb III, wo mehrere gestörte Gräber der Nitra-Kultur festgestellt wurden, und das Artefakt aus Abrahám gewann man aus Oberflächenfunden B. Novotnýs vom Jahr 1955 in der Lage Tehelňa (Novotný 1955).

Ausgehend von der sehr großen Ähnlichkeit und Anfertigungstechnik des Goldblechdiadems aus der Lafrakoni-Sammlung (gegenwärtig im Nationalmuseum zu Budapest untergebracht), dessen Fundort wahrscheinlich Bratislava ist (Abb. 4: 9; Novotná 1991, Abb. 2), mit den Exemplaren zweier Goldblechdiademe von der iberischen Halbinsel aus der Lokalität Cicere, Prov. La Coruńa in Nordwestspanien (Abb. 4:10a,b; Pingel 1986, Abb.8:10,11) die in die Epoche des jüngeren Horizontes der GBK datiert sind, vermuten wir, dass auch dieser bisher kulturell nicht näher eingestufte Fund mit größter wahrscheinlichkeit in den Zeitabschnitt der GBK datierbar ist.

Eine weitere, nicht weniger bedeutsame Fundgruppe bilden Funde, die aus der GBK bis in die Anfänge der Bronzezeit überlebten, und man findet sie im Inventar der ältesten Phase der Nitra-Kultur. In erster Linie können Knöpfe mit der sog. V-Bohrung erwähnt werden (Abb. 3:9), die im Inventar des Grabes 239 auf dem Gräberfeld in Výčapy-Opatovce festgestellt wurden (Abb.4:2; Točík 1979, 116). Weiters sind es die halbmondförmigen Knochenanhänger (Abb. 3:11), die in zwei Gräbern (Grab 142 und 150) auf dem Gräberfeld der Nitra-Kultur in Branč gefunden wurden (Abb.4:1; Vladár 1964, Fig. 1; 1973, Taf. XIV:2, XIII:7), und ein Wetzstein mit einer Rille zum Schleifen von Pfeilschäften aus Grab 409 in Ludanice-Mýtna Nová Ves (Abb. 3:12) zu erwähnen.

Aus der vorangehenden Analyse geht hervor, dass im älteren Zeitabschnitt der GBK das Gebiet der

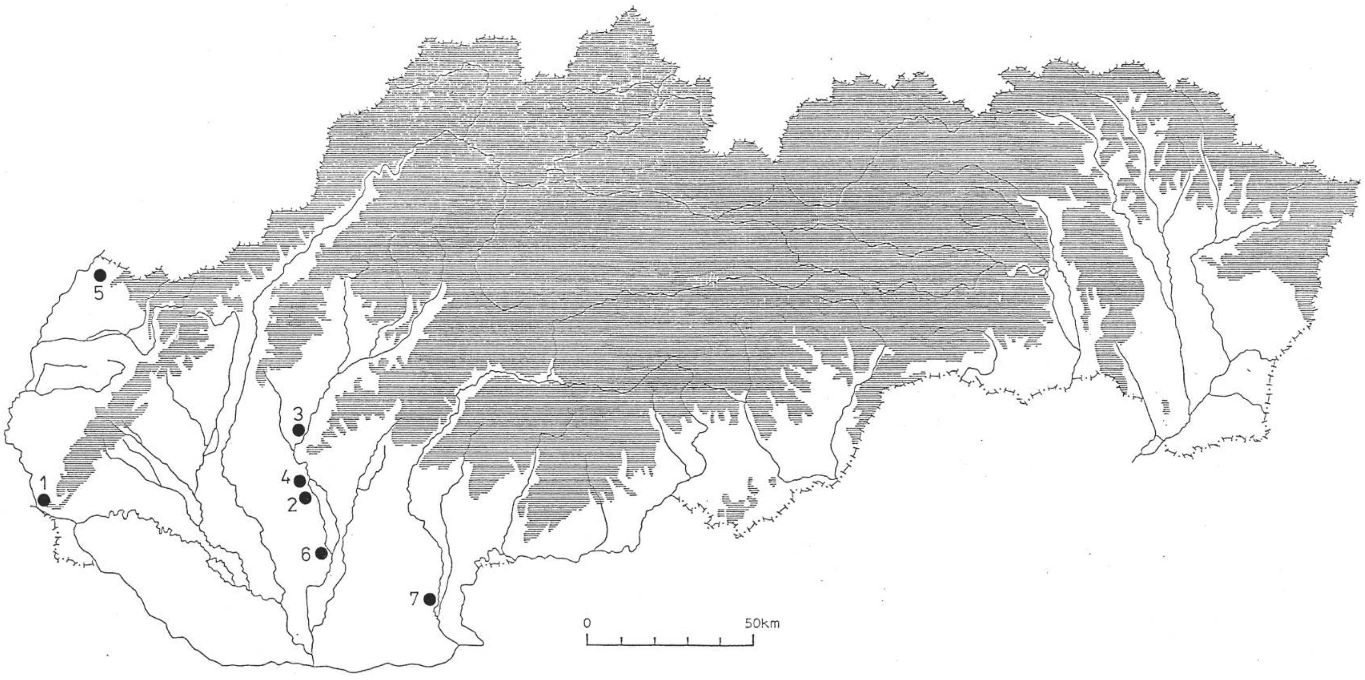

Abb. 5. Verbreitung der Somogyvár-Vinkovci-Kultur in der Slowakei. 1 – Bratislava-Devín, Devínska Nová Ves; 2 – Ivánka pri Nitre; 3 – Jelšovce; 4 – Nitra-Dolné Krškany; 5 – Skalica; 6 – Šurany; 7 – Kamenín.

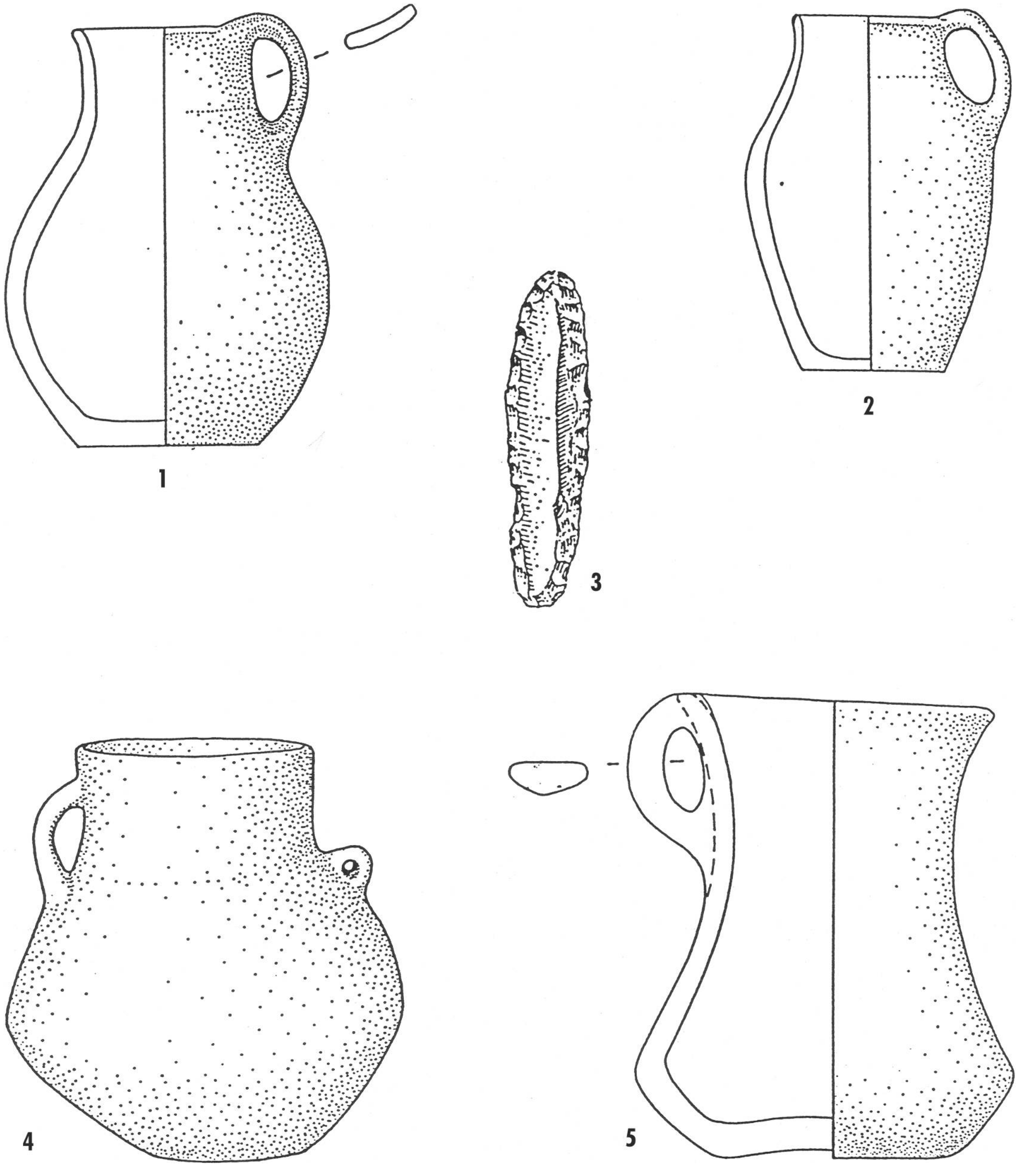

Abb. 6. Die Keramik und Silexartefakt der Somogyvár-Vinkovci-Kultur. 1, 2 – Nitra-Dolné Krškany; 3, 5 – Skalica; 4 – Ivánka pri Nitre.

Südwestslowakei lediglich an ihrem Westrand zusammenhängender besiedelt war – im Záhorie-Gebiet im Raum des slowakischen Marchtales. Im jüngeren Zeitabschnitt, bzw. in der Spätphase der GBK, skizzierte sich, dass ihre kompaktere Besiedlung bis zum Waagfluss reichte, und im östlicher liegenden Teil der Südwestslowakei kann nur mit sporadischerer Besiedlung gerechnet werden.

Eine der wichtigsten Ursachen einer solchen Entwicklung war offenbar die Somogyvár-Vinkovci-Kultur, die in ihrer jüngeren Entwicklungsphase aus dem benachbarten Transdanubien namentlich auf den südlichen und mitleren Teil der Südwestslowakei übergriff (Abb. 5: Ivánka pri Nitre, Jelšovce, Nitra-Dolné Krškany, Šurany, Kamenín). Davon zeugen vor allem mehrere Funde aus dem mittleren und unteren Nitratal. In erster Linie kann das Hügelgrab in Šurany erwähnt werden (Novotná / Paulík 1989, 372) das die Vorstoßrichtung der Träger der Somogyvár-Vinkovci-Kultur in der Richtung nach Norden von der Dona belegt. Der zweite Fundort ist Nitra, Teil Dolné Krškany, wo zwei unverzierte Krüge gefunden wurden (Abb. 6:1,2; Marková 1995, 93). Verknüpfbar ist mit der Somogyvár-Vinkovci-Kultur auch das Skelettgrab aus Ivanka pri Nitre (Abb. 6:4; Vladár 1966, Abb. 28), das einen einfachen Krug mit einem Zylinderhals und Bandhenkel und ein amphorenförmiges Gefäß mit zwei asymmetrisch aufgesetzten Henkeln von verschiedener Größe enthielt). Direkte Analogien zu beiden Keramikformen sind aus dem Keramikinventar der Somogyvár-Vinkovci-Kultur im Gebiet des ehemaligen Jugoslawiens bekannt – auf den Lokalitäten Ilok und Gradina nad Bosutom (Tasić 1984, Taf. I:4; III:1). Eine Analogie zum Krug kennt man ebenfalls aus einem Skelettgrab in Ungarn, aus Budapest – Szentmihály-utca, das in den Abschluss der Kosihy-Čaka-Makó-Kultur datiert ist (Kalicz-Schreiber 1976, Abb. 5:1).

Als den ersten Siedlungsfund der Somogyvár-Vinkovci-Kultur aus dem Gebiet der Südwestslowakei kann man mit größter Wahrscheinlichkeit das Objekt 1/82 aus Jelšovce betrachten, das ein Fragment eines sog. Nagyrév-Kruges vom balkanischen Typ enthielt, weiters Bruchstücke mehrerer topfförmiger Gefäße mit kurzem Zylinderhals, ein knöchernes meißelförmiges Werkzeug (wahrscheinlich einen Retuscheur), ein Geweih mit Bearbeitungsspuren, einen Schlagstein, eine Steinunterlage und zwei Silexklingen. Analogien zum Krugbruchstück kann man im Keramikmaterial aus einem Hügelgrab der Somogyvár-Vinkovci-Kultur in Rajka-Modrovich puszta in Nordwestungarn finden (Figler 1994, Abb. 9:4), aber auch in Krügen der Nagyrév-Kultur und Krügen des Typs Letonice, die für die jüngere Phase der mährischen Schnurkeramik charakteristisch sind (Šebela 1981, Abb. 2,10a,b). Gefäßen mit kurzem Zylinderhals begegnen wir im Siedlungsmaterial der Somogyvár-Vinkovci-Kultur aus Györszemere-Tóthtag (Figler 1994, Abb.7:10). Beachtenswert ist von den übrigen Funden ein knöchernes meißelförmiges Werkzeug, zu welchem direkte Analogien aus Grab 247 in Branč bekannt sind (Vladár 1973, Taf. XXIX:7), das in die Frühphase der Nitra-Kultur datierbar ist, und aus Grab 18 der Protoaunjetitzer Kultur in Marszowice in Schlesien (Seger 1904, Abb.10). Das Objekt enthielt auch eine verhältnismäßig große Menge von Tierknochen, die intentionell gespalten waren. Die gegenseitige Konstellation der im Objekt gefundenen Gegenstände ermöglicht Erwägungen über seine Funktion als Opfergrube von ähnlichem Charakter, wie es eine in Ungarn auf der Lokalität Csepel-Hollandi-utca war, die in die GBK-Kultur datiert ist (Kalicz-Schreiber 1981, Abb.5:6). In diesem Zusammenhang ist es nötig das Objekt IV (Grube 2) aus Sikenica – Agátov Dvor zu erwähnen, das auch warhscheinlich von einer Kultbedeutung war. Das Objekt besaß, außer der Keramik, die nahe der Begleitkeramik der GBK stand, zwei sonderbare Tongegenstände mit hornförmigen Vorsprüngen, der rote Farbstoff, das Webgewicht und ein Bruchstück des Reibsteins (Novotný 1968, 17-28).

Die Somogyvár-Vinkovci Kultur reichte auch in das außerkarpatische Gebiet der Slowakei – in die Záhorie-Region (Abb. 5: Bratislava – Devín (Burgberg), Devínska Nová Ves, Skalica; Abb. 6:3, 5). Im Záhorie-Gebiet in letzter Zeit auch mehrere neue Fundstellen der Kosihy-Čaka-Makó-Kultur festgestellt wurden (Gajary-Jazierkové, Kostolište, Lozorno, Záhorská Ves, Zohor, Abb. 7: 8, 9, 11, 13; Marková / Elschek 2001, 147; Elschek / Varsík 2001, 58; Elschek / Vrablec 2001, 60-67). Diese Kultur hat hier eine zusamenhängendere Besiedlung etwa mit lokaler Färbung bildet (z.B. Schwammenhöfer 1988, Abb. 14).

Im Ostteil der Südwestslowakei, d. h. in der Region zwischen dem Tal des Žitava- und des Eipelflusses, kann mit dem Überleben der spätäneolithischen Kosihy-Čaka-Makó-Kultur gerechnet werden, was gut durch den Inhalt des Siedlungsobjektes Nr. 26 in Kamenín im unteren Grantal dokumentiert ist (Nevizánsky 2002, Taf. I-V). Im Keramikmaterial des angeführten Objektes sind, außer der überlebenden Kerbschnittverzierung auf den slawonischen Fußschüsseln, bereits evidente Einflüsse der Somogyvár-Vinkovci-Kultur erkennbar (Ritzverzierung auf Keramik und zwei Tonscheiben) und ebenfalls der Csepel-Gruppe der GBK Einfluss, bzw. der Früh-(Proto) Nagyrév-Kultur (Verzierung mit plastischen Rippen auf der Gefäßoberfläche), die in das untersuchte Gebiet aus dem Raum des Donauknies in Ungarn einsikkerte. Diesen Kultureinfluss bestätigen letzten Endes auch die seit längerem bekannten Funde von Krügen aus Brandgräbern der jüngeren Phase der Kosihy-Čaka-Makó-Kultur aus der eponymem Lokalität in Čaka (Vladár 1966, Abb. 25 u. 26; Kalicz-Schreiber / Kalicz 1998, 335).

Verhältnismäßig ausgeprägt ist im Záhorie Gebiet auch eine Besiedlung der schnurkeramischen Kultur (Abb. 8: Gajary-Jazierkové, Gbely, Kostolište, Kúty, Skalica, Senica), die, nach bisherigen Funden, bis zum Tor in das Karpatenbecken von Westen reichte – nach

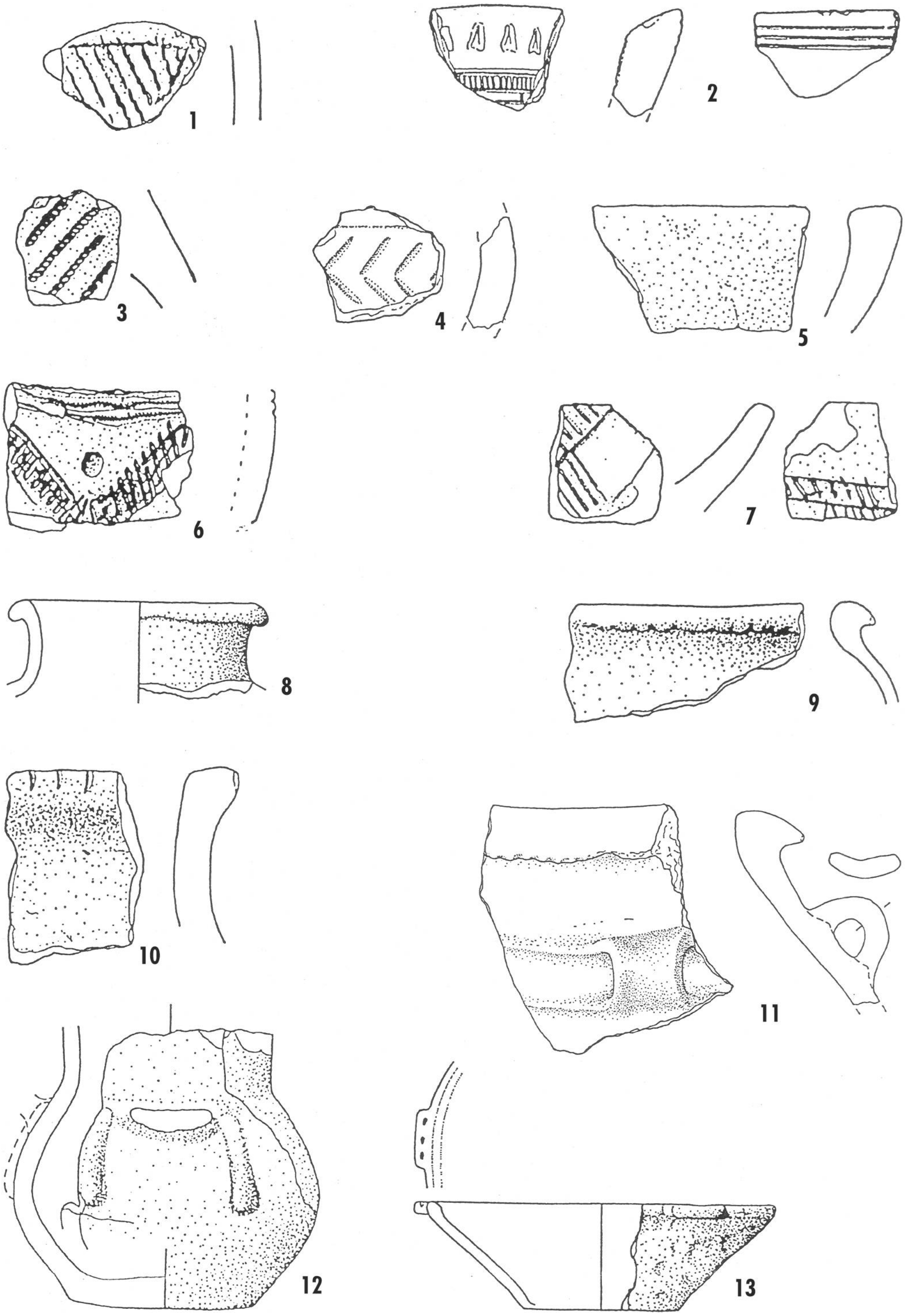
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Abb. 7. Keramische Funde aus dem Ausklang des äneolitischen Kulturkomplexes (Záhorie-Region). 1-3, 5-7, 10, 12 – Gajary "Jazierkové"; 4 – Gbely; 8, 9, 13 – Lozorno; 11 – Záhorská Ves.

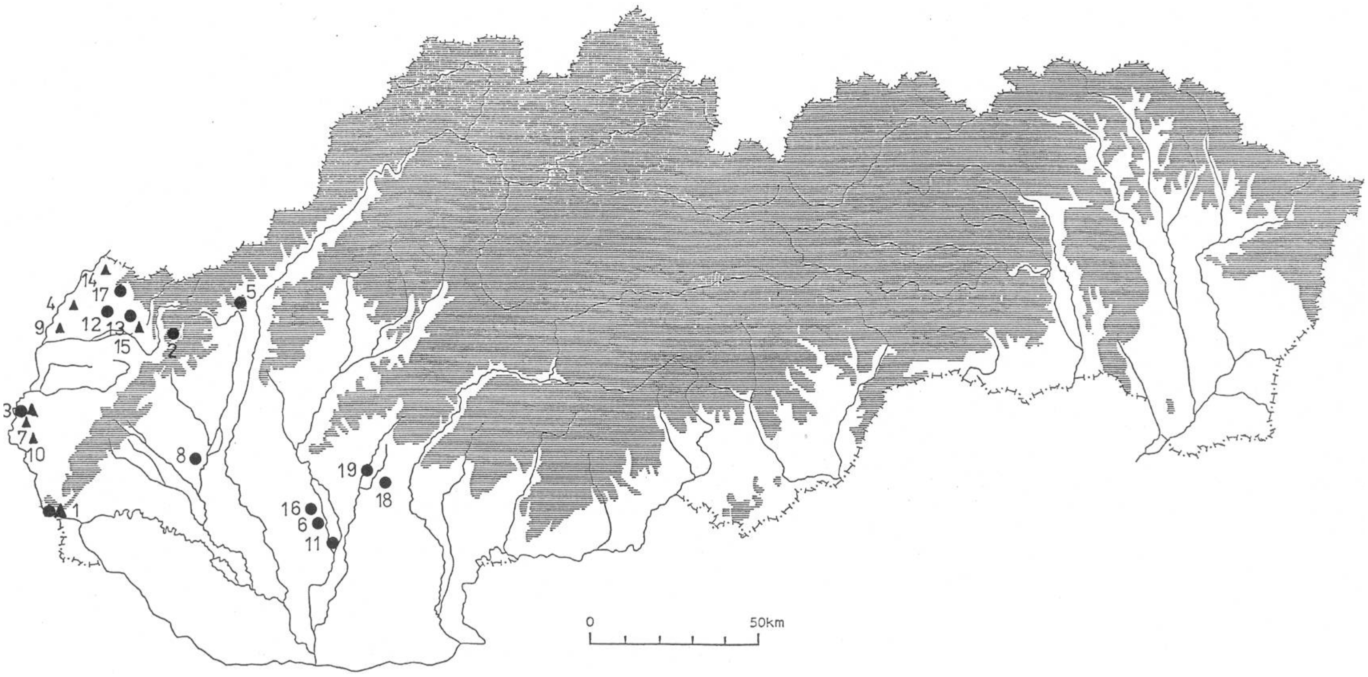

Abb. 8. Verbreitung der keramische Funde (Dreieck) und Steinhammeräxte (Punkt) der Kultur mit der Schnurkeramik. 1 – Bratislava - Devín, 2 – Brezová pod Bradlom, 3 – Gajary, 4 – Gbely, 5 – Horné Bzince, 6 – Komjatice, 7 – Kostolište, 8 – Križovany nad Dudváhom, 9 – Kúty, 10 – Láb, 11 – Nitriansky Hrádok, 12 – Petrova Ves, 13 – Rohovské Rybky, 14 – Skalica, 15 – Senica, 16 – Štefanovičová, 17 – Dudváh-Vlčkovce, 18 – Volkovce, 19 – Zlaté Moravce.

Bratislava-Devín. Außer Keramik jüngeren Gepräges (Skalica-Kameňolom) taucht auch Keramik auf, die der älteren Phase der schnurkeramischen Kultur angehört. Funde vereinzelter Steinhammeräxte des schnurkeramischen Typs, die auf mehreren Fundstellen der Südwestslowakei gefunden wurden (Abb.8: Bratislava; Brezová pod Bradlom; Gajary; Horné Bzince; Komjatice, Kostolište; Križovany nad Dudváhom; Kúty, Láb; Nitriansky Hrádok; Petrova Ves; Rohovské Rybky; Skalica; Senica; Štefanovičová; Dudváh - Vlčkovce; Volkovce; Zlaté Moravce), deuten jedoch an, dass mit einem Einschlag dieser Kultur auch im breiteren Raum gerechnet werden muss.

Auf die Kompliziertheit der kulturhistorischen Situation an der Schwelle der Bronzezeit verweisen in der untersuchten Region auch zur nicht zahlreiche festgestellte Fundstellen der Gruppe Leithaprodersdorf (Devínska Nová Ves; Eisner 1931, 5-11), die in östlicher Richtung bis in das Mittellaufgebiet des Nitra-Flusses in das Milieu der Nitra-Kultur vordrang (Jelšovce). Umgekehrt ist das Vorhandensein der Nitra-Kultur am Westrand der Südwestslowakei mit ersten Funden angedeutet – in der Záhorie-Region (Gajary-Prašivá; Elschek / Marková 2000; Kostolište).

Die neueste Geländegrabung in Gajary-Jazierkové ergab Siedlungsmaterial in welchem Schnurkeramik der jüngeren Phase (Abb. 7:1,3,10,12), Material der Kosihy-Čaka-Gruppe (Abb. 7:7) wie auch Scherbenmaterial mit Ornamentik vorkommt, die der Glockenbecherkultur nahesteht (Abb. 7:2,6 - z.B. mit Analogien im Grab 36 in Vyškov in Mähren). Diese Situation verweist auf die Komplizerheit der Kulturentwicklung im Westteil der Slowakei - in der Záhorie-Region, auf eine wahrscheinliche gewisse Gleichzeitigleit und Bindung der erwähnten Kulturen. Es handelt sich offenbar um eine Situation von ähnlichem Gepräge wie im anliegenden mährischen Gebiet (Fundhorizont Strachotín-Držkovce; Peška 2000, 243-268).

Literatur

Bača R. 1999. Nátepná doštička z Veselého. *Študijne Zvesti AÚ SAV* 33, 145–147.

Bača R. / Bartík J. / Farkaš Z. 2000. Nálezy zo súkromnej zbierky. *AVANS v roku 1999*, 19. Nitra.

Bátora J. 1984. Prieskum zameraný na zistenie sídlisk zo začiatku doby bronzovej. *AVANS v roku 1983*, 34–37. Nitra.

Budinský-Krička V. 1932. Archeologické nálezy z Liborče. *Čas. MSS* 24, 59–60.

Budinský-Krička V. 1965. Gräberfeld der späten schnurkeramischen Kultur in Veselé. *Slovenska Archeologia* 13, 51–106.

Drahošová V.1997. Zvoncovité poháre na Záhorí a na Slovensku. *Záhorie* 6, 6–11.

Eisner J. 1931. Hroby a hřbitovy z doby raně bronzové bronzové na Slovensku. In: *Príspevky k praveku, dejinám a národopisu Slovenska*, 5–11. Bratislava.

Elschek K. / Marková K. 2000. Archeologický výskum a prieskum na Záhorí v záujmovom území podzemných zásobníkov plynu. *AVANS v roku 1998*, 53–62. Nitra.

Elschek K. / Varsik V. 2001. Záchranný výskum v Lozorne. *AVANS v roku 2000,* 56–60. Nitra.

Elschek K. / Vrablec M. 2001. Systematický celoplošný prieskum katastra obce Zohor. *AVANS v r. 2000*, 60–69. Nitra.

Figler A. 1994. Die Fragen der Frühbronzezeit in Nordwest-Transdanubien. In: *Die Fragen der Bronzezeit. Archäologische Konferenz des Komitates Zala und Niederösterreich III. Keszthely 5. – 7. 10. 1992.* Zalai Muzeum 5, 21–38.

Hájek L. 1957. Knoflíky středoevropské skupiny kultury zvoncovitých poháru. *Památky archeologické* 48, 389–424.

Hájek L. 1961. Kostrový hrob kultury zvoncovitých poháru ze Stehelčevsi. *Památky archeologické* 52, 138–148.

Hájek L. 1966. Die älteste Phase der Glockenbecherkultur in Böhmen und Mähren. *Památky archeologické* 57 (1966), 210–241.

Chropovský B. 1968. Abrahám. Fundbericht Nr. 4232/68 im Archiv des AI SAW Nitra.

Kalicz-Schreiber R. 1976. Die Problem der Glockenbecherkultur in Ungarn. In: Lanting J.N. / Van Der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 183–215. Bussum/Haarlem.

Kalicz-Schreiber R. 1981. Opfergruben aus der Frühbronzezeit in der Umgebung von Budapest. *Slovenska Archeologia* 29, 75–86.

Kalicz-Schreiber R. / Kalicz N. 1998. Die Somogyvár-Vinkovci-Kultur und die Glockenbecher in Ungarn. In: Fritsch B. / Maute M. / Matuschik I. / Müller J. / Wolf C. (Hrsg.),*Tradition und Innovation. Festschrift für Christian Strahm.* Internationale Archäologie. Studia Honoraria 3, 325–347. Rahden/Westf.

Krakowská Ľ. / Studeníková E. 1996. Príspevok k osídleniu „Pieskov" v Zohore, okr. Bratislava – vidiek. *Zbor. SNM. Arch.* 6, 123–148.

Marková K. 1995. Eneolitické nálezy z Nitry-Dolných Krškán. *AVANS v roku 1993*, 93. Nitra.

Marková K. / Elschek K. 2001. Sídliskové nálezy z Gajár. *Archeologicke výskumy a nálezy na Slovensku v roku 2000*, 147–149. Nitra.

Mitscha-Märheim H. 1924. Vorgeschichtliches aus dem unteren Grantale. *Wiener Prähistorischer Zeitschrift* 11, 105–117.

Nevizánsky G. 2002. Príspevok k mladšiemu stupňu kultúry Makó-(Kosihy)-Čaka na juhozápadnom Slovensku. *Slovenská Archeológia* 49 (2001), 19–38.

Novotná M. 1991. Zwei unbekannte Goldfunde aus der Slowakei. *Starinar* 40-41 (1989/1990), 131–134. Beograd.

Novotná M. / Paulík J. 1989. Neskoroeneolitická mohyla v Šuranoch, okr. Nové Zámky. *Archeologické rozhledy* 41, 368–378.

Novotný B. 1955. Abrahám. Fundbericht im Archiv des AI SAW Nitra.

Novotný B. 1968. Výskum v Sikenici, okr. Levice. *Musaica* 8, 17–28.

Peška J. 2000. K vybraným problémum relativní chronologie v období mladého a pozdního eneolitu na Moravě. *Pravěk NŘ* 9 (1999), 243–268.

Pichlerová M. 1968. Eneolitický kostený závesok z Jablonca. *Archeologické rozhledy* 20, 351–352.

Pichlerová M. 1971. K nálezom kultúry zvoncovitých pohárov v Skalici. *Zbor. SNM. Hist.* 11, 65–68.

Pingel V. 1986. Zum Beginn der Goldmetallurgie im Westen der Iberischen Halbinsel. In: *Gedenkschrift für Gero von Merhart zum 10 Geburtstag*. Marburger Studien zur Vor-und Frühgeschichte 7, 193–211. Marburg.

Schwammenhöfer H. 1988. Endneolithische Keramik aus Obersulz und Schleinbach in Weinviertel. *Fundberichte Österreich* 27, 99–119.

Seger H. 1904. Das Gräberfeld von Marschwitz, Kr. Ohlau. *Schlesiens Vorzeit N. F.* 3, 27–42.

Šebela Ľ. 1981. Die mährische Schnurkeramik und die Frühbronzezeit. *Slovenská Archeológia* 29, 181–189.

Tasić N. 1984. Die Vinkovci-Kultur. In: Tasić N. (Hrsg.), *Kulturen der Frühbronzezeit des Karpatenbeckens und Nordbalkans*, 15–32. Beograd.

Točík A. 1964. *Opevnená osada z doby bronzovej vo Veselom.* Bratislava.

Točík A. 1979. *Výčapy-Opatovce a ďalšie pohrebiská zo staršej doby bronzovej na juhozápadnom Slovensku.* Nitra.

Točík A. / Budinský-Krička V.1987. Z archeologických zbierok na Slovensku. *Zbor. SNM Hist.* 27, 63–93.

Točík A. / Lichardus J. 1964. Neolitická jama vo Výčapoch-Opatovciach. *Památky archeologické* 55, 246–278.

Vančo M. 1998. Nové eneolitické nálezy z Vrádišťa. *AVANS v roku 1996*, 163. Nitra.

Vladár J. 1964. Vplyvy kultúry zvoncovitých pohárov v náplni nitrianskej skupiny. *Študijne Zvesti AÚ SAV* 13, 111–118.

Vladár J. 1966. Zur Problematik der Kosihy-Čaka-Gruppe in der Slowakei. *Slovenská Archeológia* 14, 245–336.

Vladár J. 1969. Prvé nálezy keramiky kultúry zvoncovitých pohár na Slovensku. *Slovenská Archeológia* 17, 97–118.

Vladár J. 1973. *Pohrebiská zo staršej doby bronzovej v Branči*. Bratislava.

Vladár J. 1976. Zum Problematik der Glockenbecherkultur im Mitteldonauraum. In: Lanting J.N. / Van Der Waals J.D. (eds.), *Glockenbecher Symposion Oberried 1974*, 217–228. Bussum/Haarlem.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

The Late Phase of the Bell Beaker - Csepel Group in Hungary

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The territory of Budapest occupied a *special place* in the early Bronze Age of Hungary due to the closeness of the Danube and its natural fords. The Bell Beaker culture infiltrated from the west, the Bohemian-Moravian territories at the end of the Makó period (end of Early Bronze Age 1/A). The background was significantly different here from that in other parts of Central Europe. In Hungary, the local base in the occupation area of the Bell Beakers, later called as Bell Beaker - Csepel group in the region of Budapest was provided not by the Corded Ware but by the Makó and Somogyvár cultures. The study of the Bell Beaker-Csepel group is linked with Rózsa Kalicz-Schreiber's name (Schreiber 1972, 1973a, 1973b). Its occupation zone is closely determined by the Danube banks (defence of strategically important territories, Fig. 1). Most of the nearly 60 archaeological sites can be found in the Csepel Island and on the right bank of the Danube. Nevertheless, scattered finds are known from more distant territories as well (Mezőkomárom) (Kalicz-Schreiber 1981, Fig. 1). The geomorphological conditions (swamps) explain why the left bank of the Danube was neglected. Earlier, the infiltration of the Bell Beaker - Csepel group was dated from the period preceding the development of the Nagyrév culture, while recent research implies that the Nagyrév culture ("proto-Nagyrév") developed parallelly to the Makó and Ada groups (FBI) along the Hungarian middle reach of the Danube (Dunaföldvár-Kálvária) (Szabó 1994, 61–71; Bóna 1992, 13–14). The late phase of the Somogyvár-Vinkovci culture occupied the larger part of Transdanubia at the beginning of phase FBII / A. Excavations suggest that the Bell Beaker - Csepel group settled along the Danube, until the southern tip of the Csepel Island, at the same time (Ecsedy 1979, Kalicz-Schreiber 1989, Bóna 1992). Rózsa Kalicz-Schreiber called already attention to the north-south intermediary role of the Somogyvár-Vinkovci culture (Kalicz-Schreiber 1991, 9–43). Its effect manifested in the dominant role of the high-necked vessels of double conical or rounded bodies in the early phase of the Nagyrév culture, while vessels with asymmetrical handles (Fig. 2:3), known from the Somogyvár-Vinkovci and late Vučedol cultures, appeared in the settlements at the time when the Bell Beaker - Csepel group arrived (Szigetszentmiklós-Üdülősor) (Endrődi 1992, 93–94).

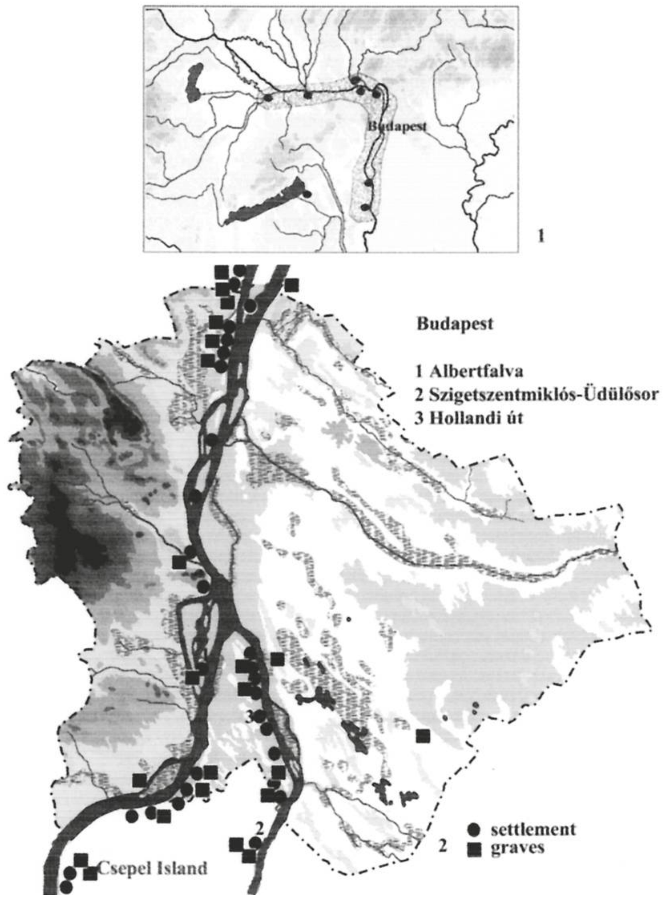

Fig. 1. Archaeological sites of Bell Beaker Csepel Group in Hungary.

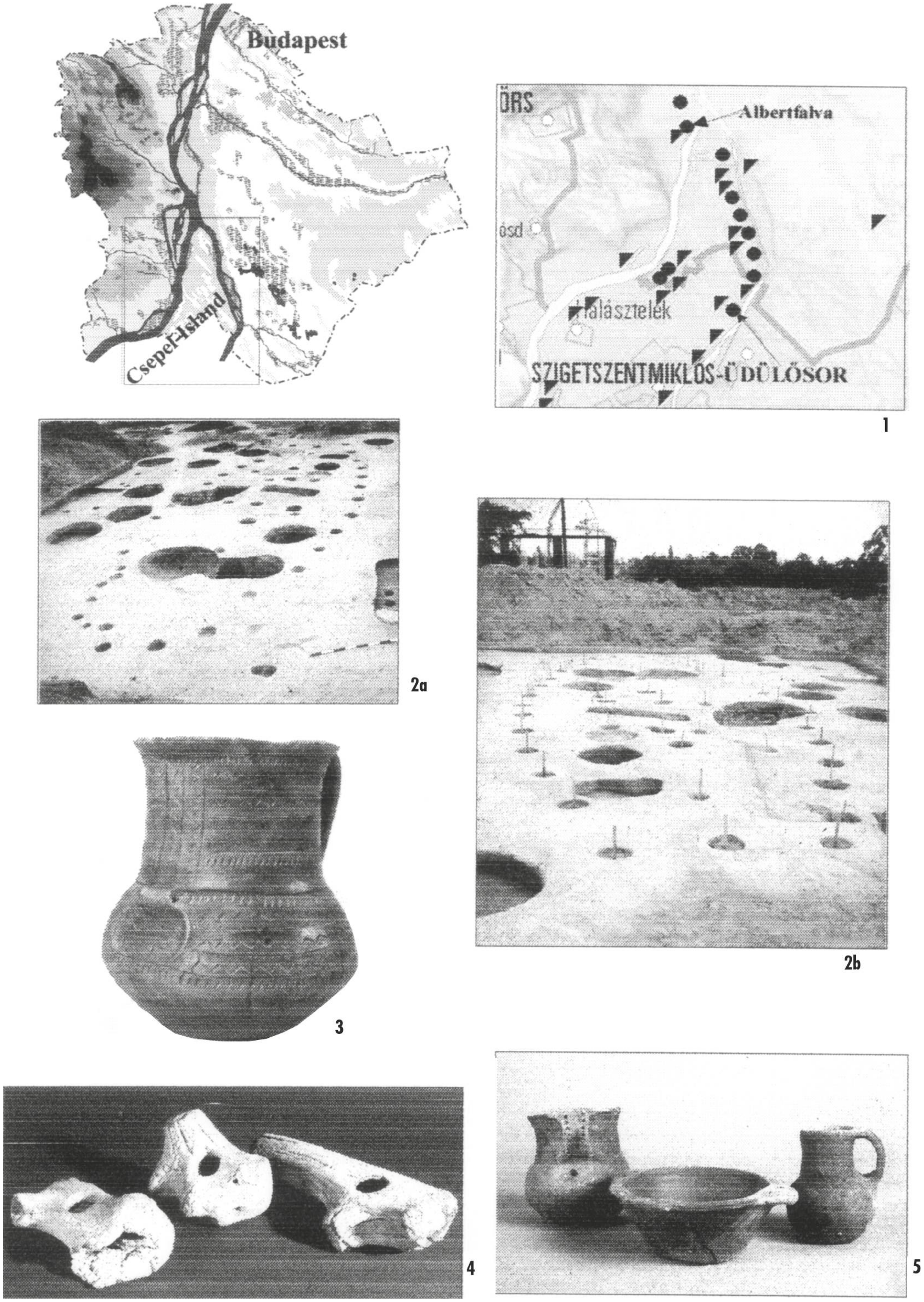
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Fig. 2. House with arched walls and finds from Szigetszentmiklós-Üdülősor.

The characteristic finds of the Bell Beaker - Csepel group, as bell beakers with zonal decoration, wrist plates, arrowheads and perforated bone buttons, are met first of all in inhumation graves with crouched skeletons and in burials with scattered ashes. The dominant burial rite was cremation burial in urns, which is of a local origin (SCHREIBER 1986, 70). Rózsa Kalicz-Schreiber emphasised in her publications that no independent development phase of the Bell Beaker culture can be observed in Budapest and its environs and as the characteristic Bell-Beaker finds are always mixed with finds characteristic of the early Nagyrév culture, she reckoned the Bell Beaker - Csepel group to be part of the Nagyrév culture (SCHREIBER 1972, 151-166). Later she separated a younger phase of the Bell Beaker - Csepel group within the Nagyrév culture, which fills in phase FB II/b and which can be characterised by the lack of Bell-Beaker find assemblages (KALICZ-SCHREIBER 1981, 81-87). István Ecsedy pointed out on the occasion of the excavations of the site Szigetcsép-Tangazdaság that the disappearance (assimilation) of the "common Bell Beaker package" in the Nagyrév culture and as the bell beakers could not be found at the sites of the Nagyrév culture as results of a cultural adaptation, their conceptual correlation was not justified (ECSEDY 1988, 17). At the same time, he accepted the Bell Beaker - Csepel group as an independent cultural entity, which, regarding the older phase, seems to be reasonable. We think that the excavations on large surfaces in the recent years (Szigetcsép, Szigetszentmiklós-Üdülősor, Budapest - Albertfalva) seem to prove that a populational group carrying the characteristics of the Bell Beaker culture infiltrated at the time of the late Makó period following the phase of the proto-Nagyrév culture. The integration process started right after their settlement and by phases II/a and II/b the Bell Beaker - Csepel group had lost its integrity partly due to the northern expansion of the Nagyrév culture and partly forced by the pressure of the Somogyvár-Vinkovci culture. Fragments of bell beakers only rarely occur among the finds of the Bell Beaker - Csepel group at the time of phase II/B (which can be characterised in Hungary by the parallel existence of the late phase of the Somogyvár-Vinkovci, the early Nagyrév culture, the Nyirség and Pitvaros groups and the Lajta (Oggau) in W-NW Transdanubia). They survive in traditions and with modified decoration, objects imported from the Somogyvár-Vinkovci culture become more frequent, and the finds characteristic of the early phase of the Nagyrév culture gain dominance. Tha same process can be observed at the finds of the settlement unearthed in Budapest-Albertfalva in 2001.

The Budapest History Museum conducted rescue excavations in Albertfalva, 11th district of Budapest, in 2001 (Fig. 3:1) (ENDRŐDI 2002). The site can be found about 250 m from the main branch of the Danube, where we unearthed the remains of an Early Bronze Age settlement on a surface of 10,000 m^2, showing intensive habitation. It is characteristic of the geomorphological setting around the site that the Danube cut basins in the surface of the so-called II/a terrace during the last more humid phase before the present historical period, which enclosed terrace islands. The site is situated on such an ancient Holocene terrain on an approximately north-south directed island. The Danube basin was much wider than the present one prior to river regulations, so the Early Bronze Age settlement could not be farther from the Danube than 100–150 m. The number of the unearthed archaeological features surpasses 1000. Beside the Early Bronze Age features, some pits came from the *Middle Copper Age* (Furchenstich people) concentrated mainly in the NW part of the area.

In the Early Bronze Age settlement we unearthed the foundations of 11 timber-structure boat-shaped *houses* with arched walls (Fig. 3:2–4; Fig. 4:1–4). The houses had a northwest-southeast directed axis with entrances opening on the eastern or the western arched sides as they could be observed in several houses. The houses were 14 m long and 5 m wide in average and they were divided into rooms. The houses can be reconstructed (Fig. 3:3,4). Consequent construction periods could be observed in the eastern and western edges of the unearthed area. We unearthed postholes implying the reconstruction and enlargement of several houses. No traces of hearths were found within the houses. Each house had 3–4 *storage pits*, in which the archaeological material was different from that unearthed in the refuse pits outside the houses. The intact vessels were found in these storage pits inside the houses, and one of them contained nothing but stone tools, bone polishers (Fig. 9:6), querns and blades (Fig. 9:3–5). In some cases the horn of auroch, in one case a red deer antler and in another case an entire auroch skull with the horns were placed in the pits inside the houses. These could have been raw materials for the tools but, they could also be connected with religious ideas.

Two large (15 x 14 m, 1.80 m deep) sunken features of pit complexes were unearthed between the houses in the southern part of the unearthed settlement section. We interpreted them as *workshops*. They could originally have been clay pits, which were later transformed into workshops either after clay yielding

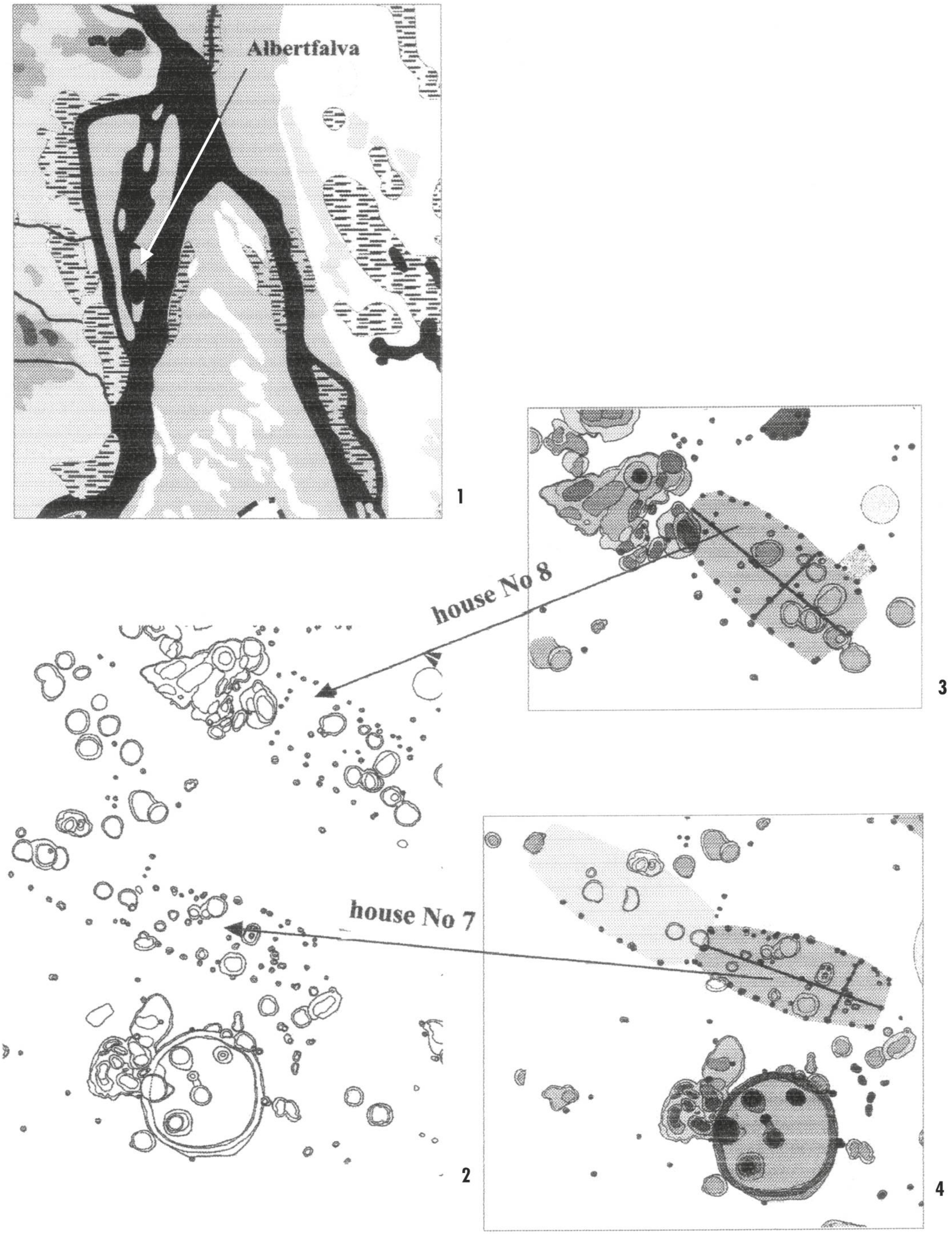
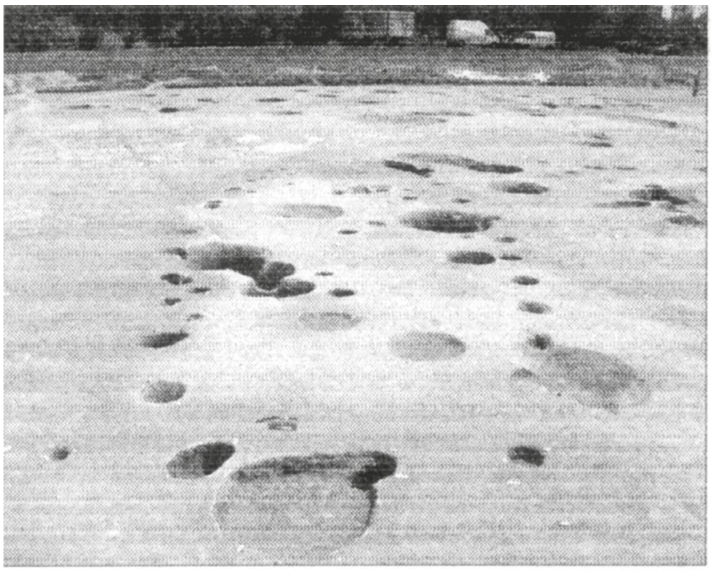

Albertfalva
1
house No 8
3
house No 7
2
4

Fig.3. Early Bronze Age settlement at Budapest-Albertfalva. Detail of the early bronze age settlement plan – house No. 8, house No 7.



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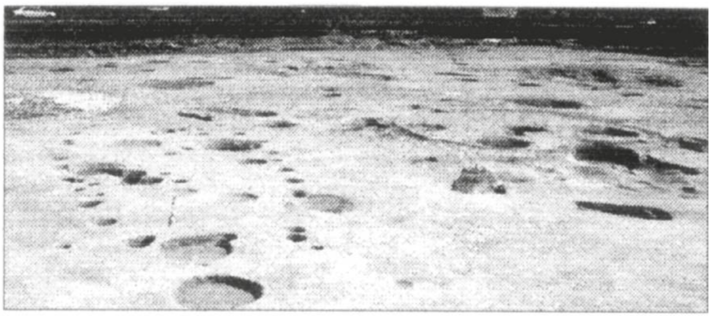

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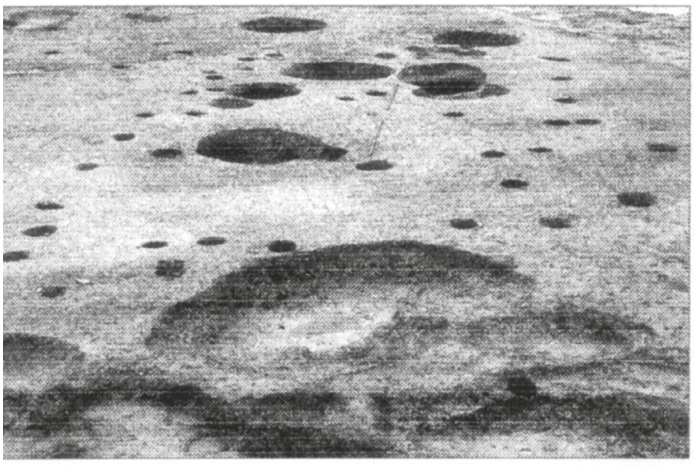

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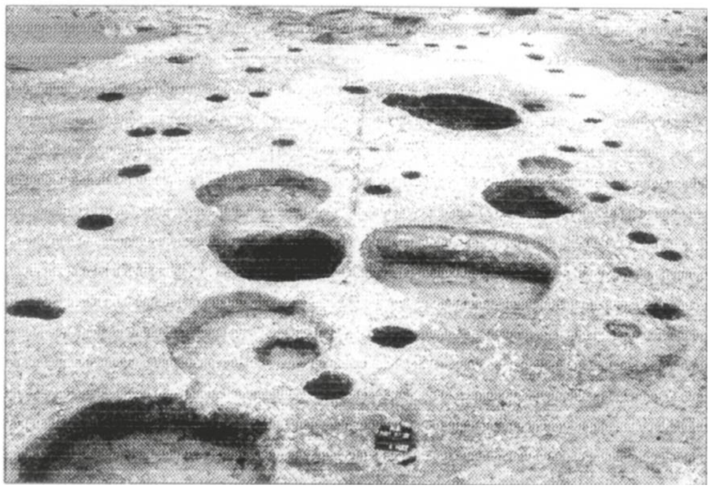

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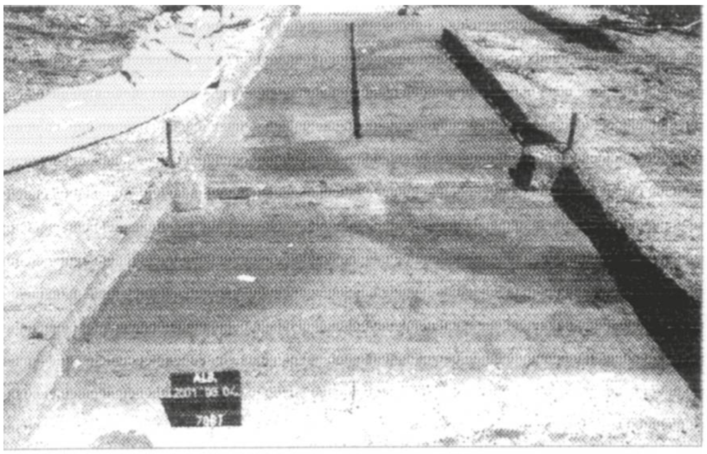
Fig.4. Early Bronze Age settlement at Budapest - Albertfalva. 1-2 – photo about excavated house No.7; 3-4 – house No 8.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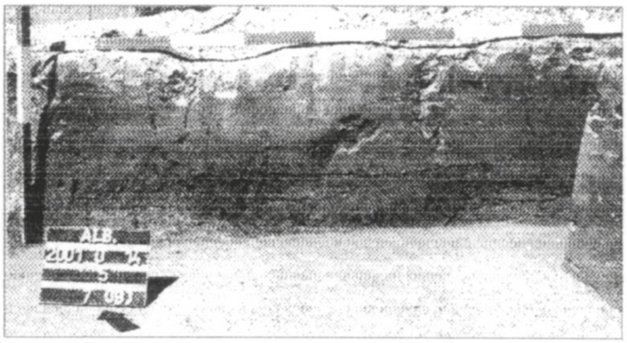
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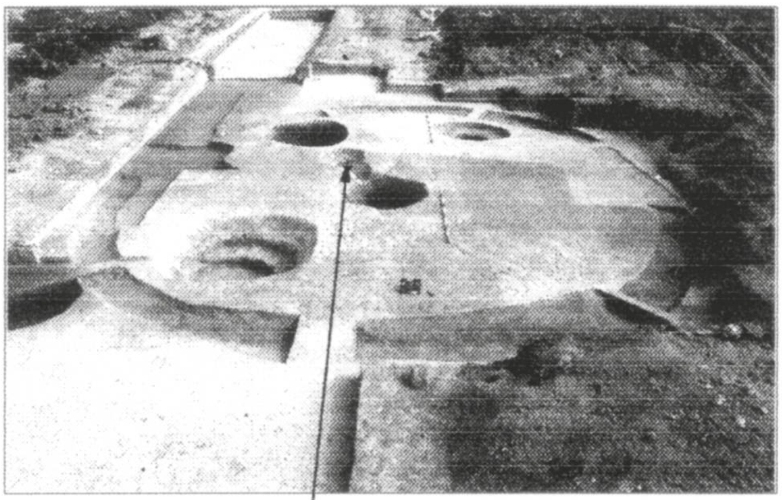

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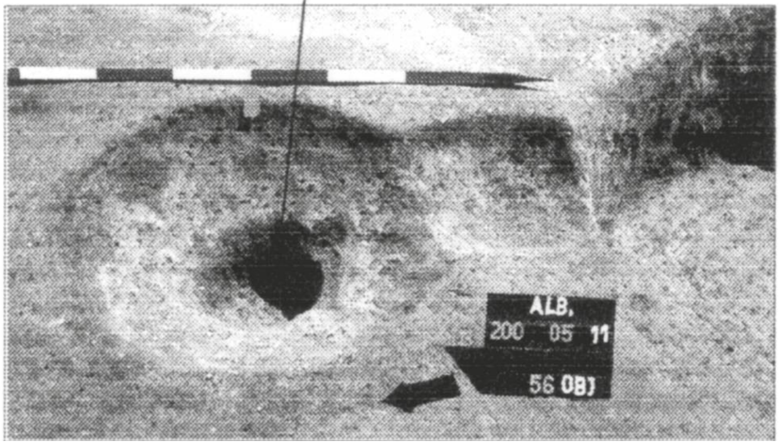
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4

Fig.5. Early Bronze Age settlement at Budapest - Albertfalva. Round ditch and details.

had been stopped or even during it. Temporary hearths were found in the large pits, and in one of them a domed oven with an ash pit was unearthed. There were several postholes in the southern workshop, which could be the remains of a roof construction raised over the firing spaces. The fillings in of the postholes close to the hearth were burnt and ashy. Probably a part of the roof construction collapsed and this could cause have destruction of the oven.

A large number of archaeological finds were recovered from both workshops, some of which was the result of natural filling in. However, the pits unearthed at the bottoms of the workshops also contained many sherds and mainly, stone tools (Fig. 9:1–7). According to Katalin T. Biró, the raw material of the stone tools came from the Farkasrét mine in the nearby Buda hills. We suppose that stone tool production could play an important role in the life of the inhabitants of the settlement. In a pit in the northern end of the settlement, 22 blanks were found hidden in a jug, which probably represented a commercial value.

A *round ditch* was unearthed with a diameter of 8.3 m in the centre of the settlement between the houses (Fig. 5). There were 3 deep pits inside the ditch. The outlines of the round ditch were already observed during the excavations 60 cm higher in the sub-humus (Fig. 5:2). It is probable that the inhabitants of the settlement raised a small artificial mound between the houses in the centre of the settlement to create, perhaps, the scene of religious life. There were two deeper postholes at the eastern edge of the round ditch (Fig. 5:4) and four large ones in front of it, which could indicate the entrance. It is, however, also possible that there was a roof construction over the round ditch, in which case it can be interpreted as a house. In Cornwall (England), a house with a diameter of 7 m, surrounded by a round ditch, was found containing the finds of the Bell Beaker culture (Harrison 1980, 77, Fig. 55).

A larger number of postholes suggesting houses could be observed only in 3 sites from the 60 ones of the Bell Beaker - Csepel group (Csepel-Hollandi road, Szigetszent-miklós-Üdülősor and Budapest-Albertfalva), yet no house structure could be reconstructed from the 150 postholes unearthed at the Hollandi road site. The first *boat-shaped house type* was unearthed at Szigetszentmiklós – Üdülősor (Endrődi 1992) on the bank of Soroksár branch of the Danube (Fig. 2:1). The house at Szigetszentmiklós was 16 m long and 8 m wide (Fig. 2:2), larger than the houses at Albertfalva, its axis was the same as that of the houses unearthed this year. At that time, this house type was unique and we interpreted it as a communal house. Rectangular sacrificial pit within the house, plastered in several layers, which can be related to the bothros of the Early Helladic Age. Geomorphological researches revealed that the Bronze Age settlement and cemetery were situated on two small islands, separated by a small branch of the Danube (Endrődi 1992, 98).

The settlement of Albertfalva unearthed this year, however, unambiguously proved that these houses were the dwelling houses of the Early Bronze Age population and attest to a settled way of life as opposed to the earlier half nomadic life style. Searching for the analogue of the house type in the circle of the Bell Beaker culture we found that only a single long house rounded at both ends (20 x 6 m) is known in the Netherlands in the western group of the culture from the so-called Veluwe Beakers horizon (Harrison 1980, 35, 36, 78). Oval timber structure houses are known in Southern England from the so-called middle Bell Beaker phase. Very few published data can be met from the territory of the eastern distribution area of the culture. Some pit houses are known from Moravia and Slovakia, Tesetice and Hostivár sites (Harrison 1980, 56). So if we consider the western analogues as a cultural impact, the link is missing from the Bohemian and Moravian territories. Post structure oblong-shaped houses with rammed floors are known from the middle and late phases of the Nagyrév culture in Hungary, which arrived from the south (Tószeg, Tiszaug-Kéménytető and Százhalombatta) (Bóna 1980, 87, Fig. 6; Csányi-Stanczik 1982; Poroszlai 1993). In the Budapest region at the previous Makó culture settlements are small, there is only indirect evidence for residential buildings, which were probably timber constructions (Kalicz-Schreiber 2001, 166, 167). Boat shaped houses have so far been found only in Budapest (Albertfalva) and its neighbouring territory (Csepel-Island) in the environment of the Bell Beaker culture, and it seems at present that no analogues are known in the neighbouring countries.

Two *inhumation graves* with crouched skeletons were found at the edge of the Early Bronze Age settlement at Albertfalva. Inhumation burials with crouched skeletons can be related in the early groups of the Bell Beaker culture in Hungary to the burial customs of the western circle including the Bohemian-Moravian region. Cremation burials in urns or with scattered ashes were more common in this period. Urn graves, however, did not contain any more the classical Bell Beaker assemblages. It can be said, on the occasion of the Albertfalva settlement, that the burial rite of the

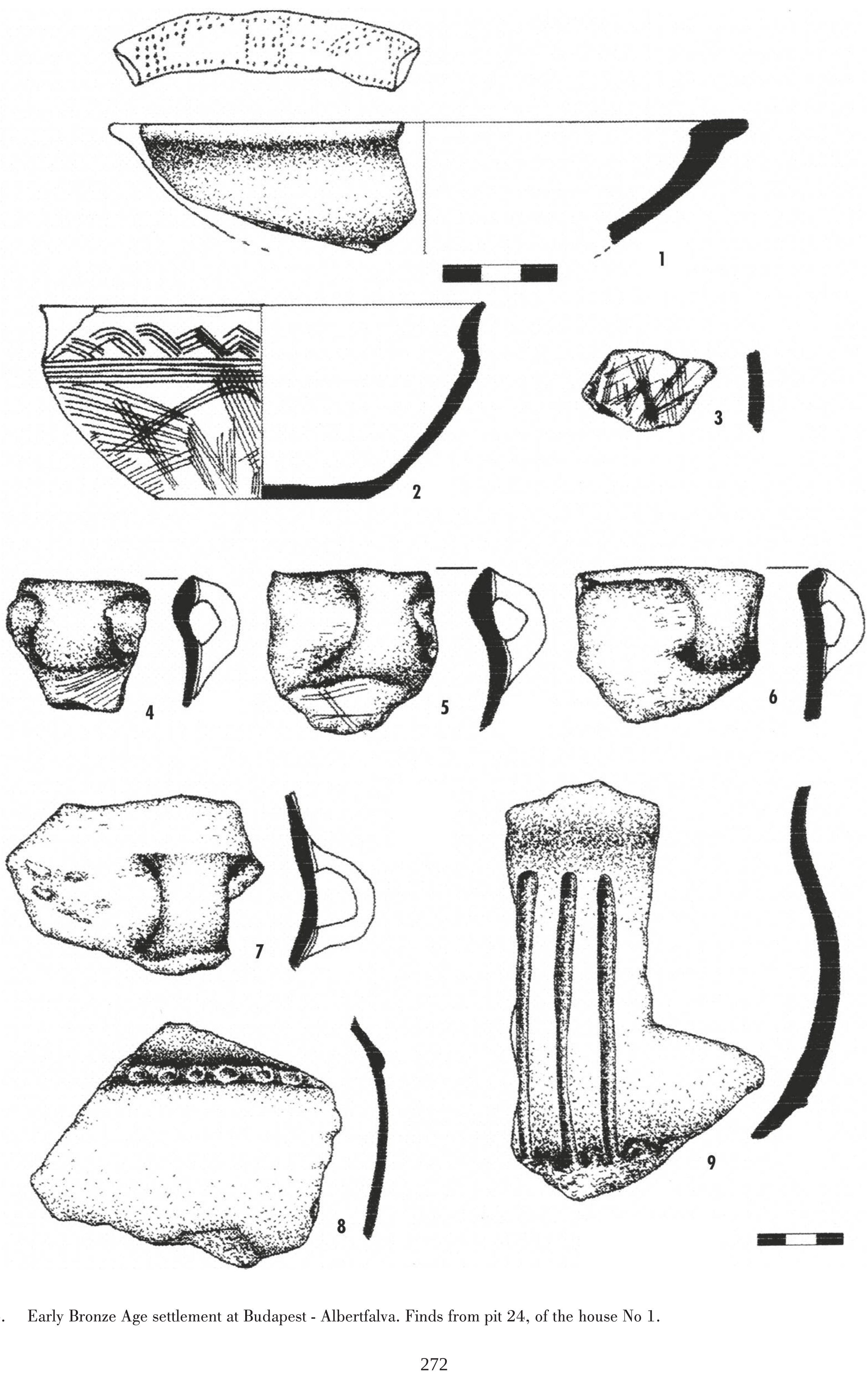

Fig.6. Early Bronze Age settlement at Budapest - Albertfalva. Finds from pit 24, of the house No 1.

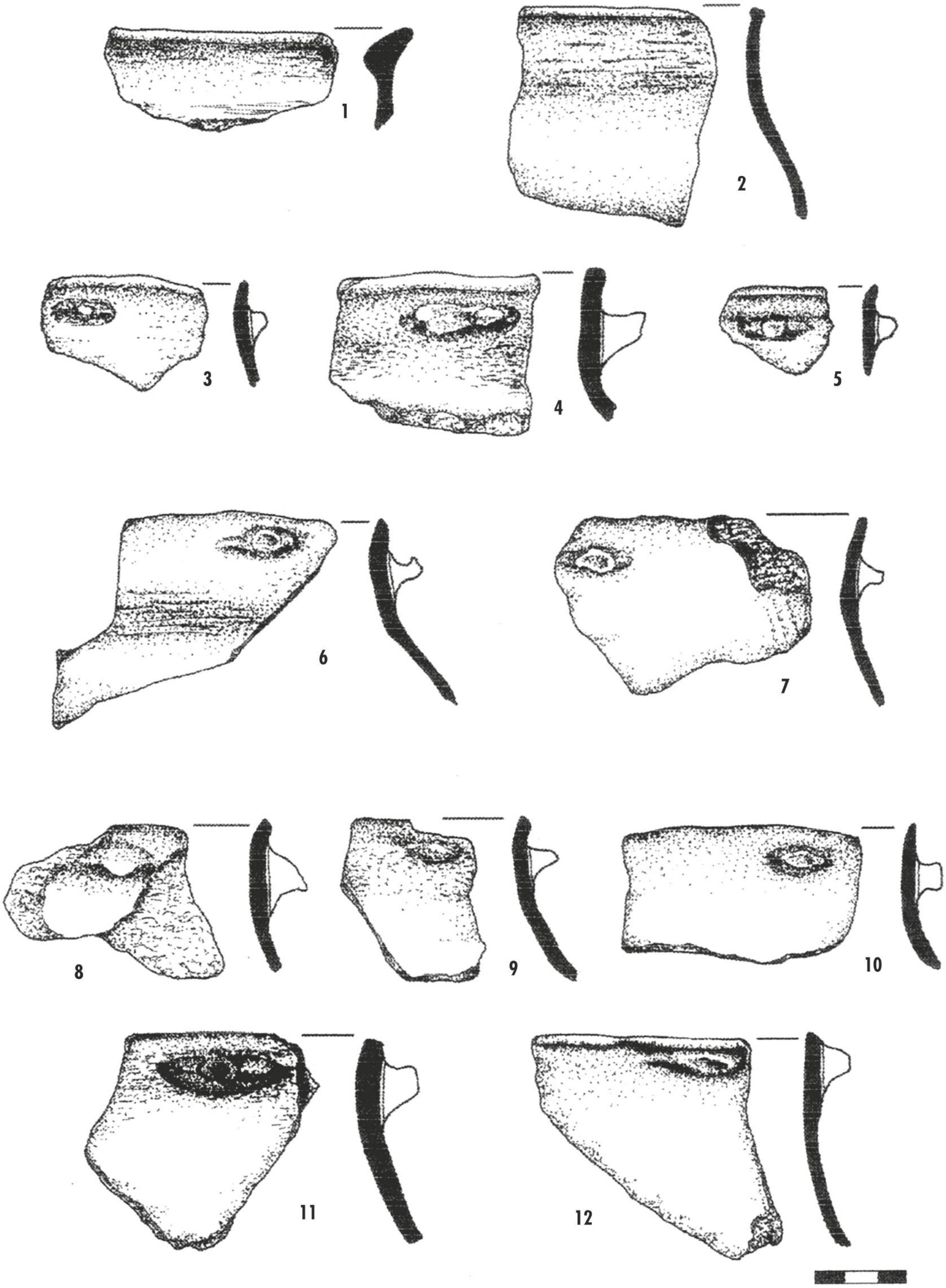
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Fig.7. Early Bronze Age settlement at Budapest - Albertfalva. Finds from pit 24, of the house No 1.

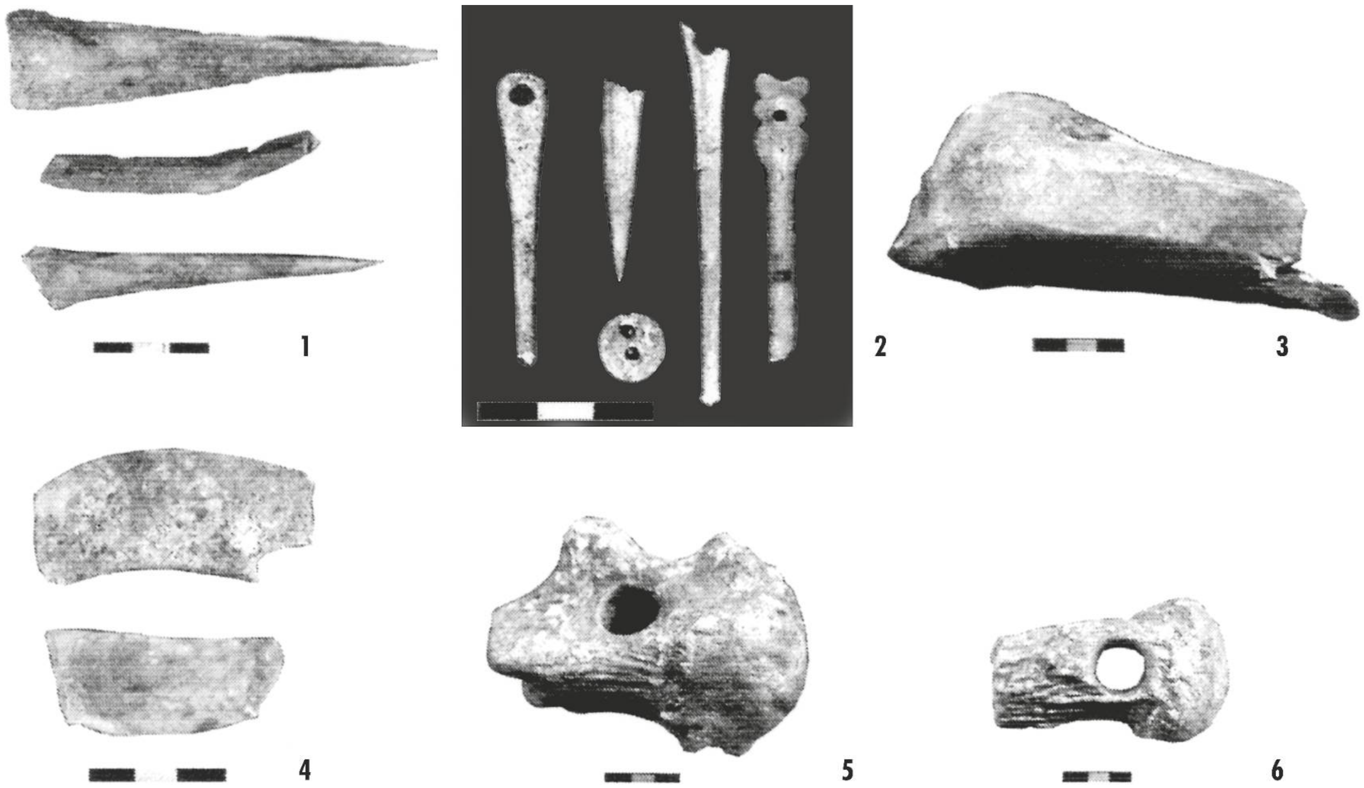


Fig.8. Early Bronze Age settlement at Budapest - Albertfalva. Bone tools.

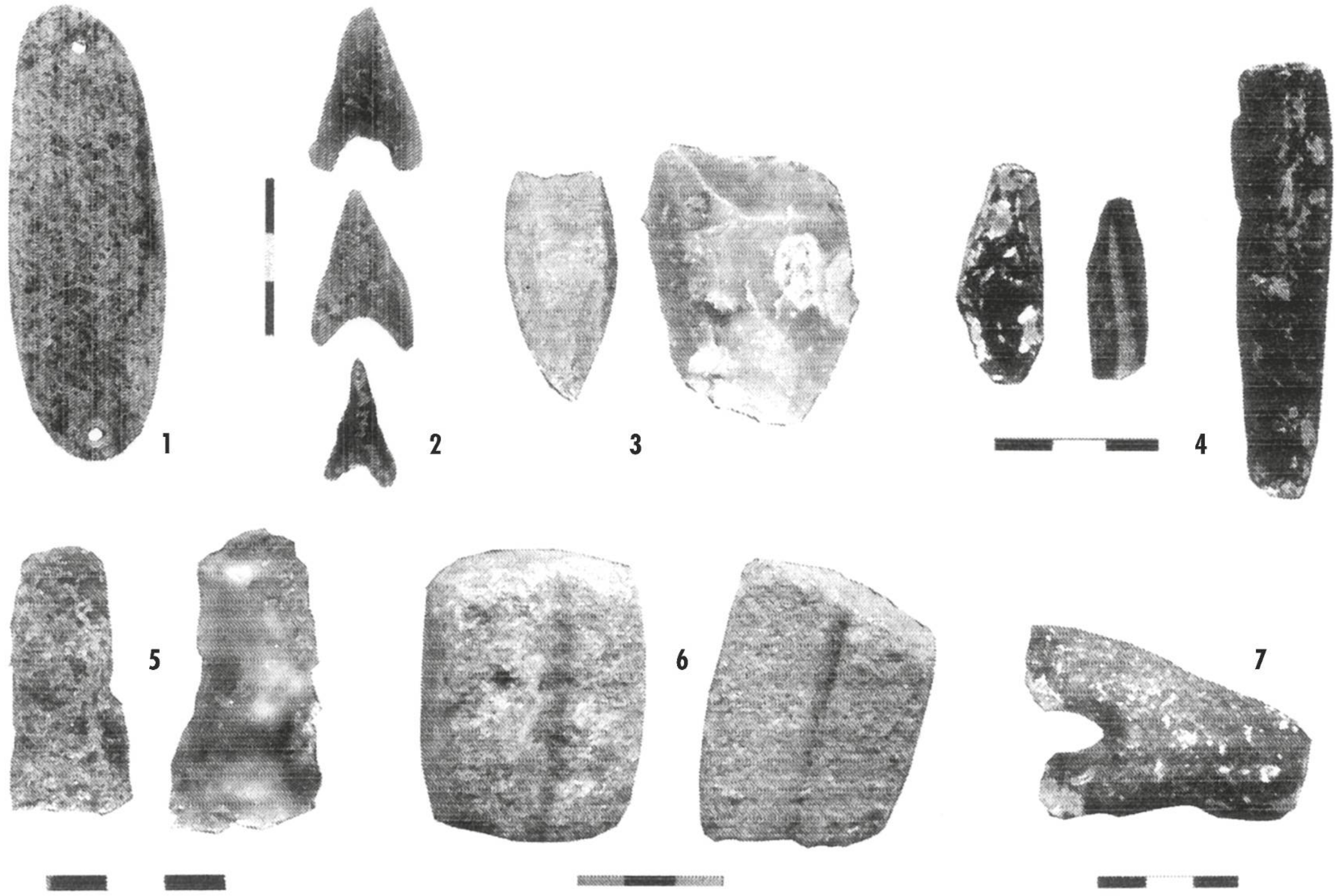


Fig.9. Early Bronze Age settlement at Budapest - Albertfalva. Stone tools.

inhumation graves with crouched skeletons found at the site was probably borrowed from the territory of the Pitvaros group through the mediation of the Early Nagyrév culture (Rákóczifalva) (Csányi 1982–1983, 34–47). The same seems to be implied by the group of inhumation graves with crouched skeletons unearthed at the northern boundary of Budapest in 2000, one of which contained, among others, a gold disc of Óbéba type.

The analogues of the find material (Fig. 6–9) can be found among the finds of phase II/b of the early Bronze Age. The analogues of the pots decorated by horizontal knobs (Fig. 7:3–12) can be found among the grave finds from Budatétény-Növény street (Kalicz-Schreiber 1981, Fig. 5:3) and in the early Nagyrév assemblage from Rákóczifalva (Csányi 1982–1983, fig 9.). Jugs decorated with vertical ribs (Fig. 6:9) and bowls with perforated pedestals can be found among the finds of the early phase of the Nagyrév culture at sites Tószeg-Ökörhalom (Csányi 1982–1983, Fig. 12:1), Szőreg and Adony (Kalicz-Schreiber 1984, Fig. 42:1–2:9), and in the graves of the Budatétény-Növény street site (Kalicz-Schreiber 1981, Fig. 3:10) from the younger phase of the Bell Beaker - Csepel group. The morphological analogues of the small bowl decorated with a network of incised zig-zag lines (Fig. 6:2–3) can be found in the above-mentioned circle and similar decoration can be observed in the find assemblages of the Vinkovci culture at the Vinkovci and Gradina sites (Tasić 1984, Fig. 4:9, 13). The ornamented, carved bone pin (Fig. 8:2) represents a younger type, which does not occur among the older finds of the Bell Beaker - Csepel group.

The radiocarbon analyses made on samples from Csepel-Hollandi road, Csepel-Háros and Szigetcsép of the Bell Beaker - Csepel group dated these sites from the first half of the 3rd millennium BC. The radiocarbon data of the Budapest-Albertfalva settlement indicate the last third of the 3rd millennium BC, which are synchronous not so much with the Bell Beaker - Csepel group than the known data of the Nagyrév culture (the analyses were carried out in Debrecen – ATOMKI conducted by Zsuzsanna Szántó in 2002, and they will be published in a subsequent paper). The latest radiocarbon date was got for the crouched skeleton in inhumation grave no. 70, which yielded an Aunjetitz type bronze pin. This date also seems to indicate the time of the abandonment of the Albertfalva settlement.

References

Bóna I. 1980. Tószeg-Laposhalom. (1876-1976). *Szolnok Megyei Múzeumok Évkönyve* 1979-1980, 83–100.

Bóna I. 1992. Bronzezeitleiche Tell-Kulturen in Ungarn. In: *Forschungen in Tell-Siedlungen an Donau und Theiss*, 9–41. Frankfurt am Main.

Csányi M. 1982-1983. A nagyrévi kultúra leletei a Közép-Tiszavidékről. *Szolnok Megyei Múzeumok Évkönyve*, 33–60.

Csányi M., Stanczik I. 1982. Előzetes jelentés a Tiszaug-Kéménytetői bronzkori tell – telep ásatásáról. *Archeologiai Értesítő*, 109, 239–254.

Ecsedy I. 1979. Die Siedlung der Somogyvár – Vinkovci Kultur bei Szava und einige Fragen der Frühbronzezeit in Südpannonien. *Janus Pannonius Múzeum Évkönyve*, 23, 97–136.

Ecsedy I. 1988. Ásatások Szigetcsép Tangazdaság lelőhelyen II. A korabronzkori település leletei. *Communicationes Archaeologicae Hungariae*, 5–16.

Endrődi A. 1992. A korabronzkori Harangedény kultúra telepe és temetője Szigetszentmiklós határában. In: *Archaeological researches on the line of M0 motorway*. BTM Műhely 5. 83–200.

Endrődi A. 2002. Characteristic elements of the settlement structure in the Early Bronze Age settlement at Budapest – Albertfalva. In: C. Kacśo (ed.), *Bronzezeitliche Kulturerscheinungen im karpatischen Raum. Die Beziehungen zu den benachbarten Gebieten*. Festchrift für Alexandru Vulpe zum 70.Geburtstag. Bibliotheca Marmatta (Baia Mare) in print.

Harrison R.J. 1980. *The Beaker Folk. Copper Age Archaeology in Western Europe.* London

Kalicz-Schreiber R. 1981. Möglichkeiten der feineren Gliederungen der Nagyrév-Kultur in Budapest. *Mitteilungen des Archaeologischen Instituts der Ungarischen Akademie der Wissenschaften* Beiheft 2, 81–86.

Kalicz-Schreiber R. 1984. Komplex der Nagyrév-Kultur. In: Tasić N. (ed.), *Kulturen der Frühbronzezeit des Karpatenbeckens und Nordbalkans*, 133–190. Beograd.

Kalicz-Schreiber R. 1989. Die älteste Bronzezeit in Nordwestungarn und ihre Beziehungen. In: *Praehistorica* XV-XVI, 249–259. Praha.

KALICZ-SCHREIBER R. 1991. A Somogyvár-Vinkovci kultúra dél-észak irányú közvetítő szerepe a korabronzkorban. *Budapest Régiségei* 28, 9–43.

KALICZ-SCHREIBER R. 2001. Veränderungen der Besiedlungsdichte in der Umgebung von Budapest während des 3. Jahrtausends v. Chr. In: LIPPERT A. / SCHULTZ M. / SHENNAN S. / TESCHLER-NICOLA M. (eds.), *Mensch und Umwelt während des Neolithikums und der Frühbronzezeit in Mitteleuropa*, 165–170. Rahden/Westf.

POROSZLAI I. 1993. Százhalombatta bronzkori története. In: *4000 év a 100 halom városában*, 9–22.

SCHREIBER R. 1972. A korabronzkor problémái Budapesten. *Archeologiai Értesítő* 99, 151–166.

SCHREIBER R. 1973a. A harangedények népe Budapesten – Die Glockenbecher-kultur in Budapest. *Emlékek Budapest múltjából*. Budapest.

SCHREIBER R. 1973b. Die Probleme der Glockenbecherkultur in Ungarn. In: A*ctes du VIIIe Congres International des Sciences et Préhistorique et Protohistoriques*. Tom. III, 141–148. Beograd.

SCHREIBER R. 1976. Die Glockenbecherkultur in Ungarn. In: LANTING J.N./VAN DER WAALS J.D (eds.), *Glockenbecher Symposion Oberried 1974*, 183–215. Bussum - Haarlem.

SCHREIBER R. 1986. Korai bronzkori csontvázas sír a Csepel-szigeten. *Archeologiai Értesítő* 113, 69–75.

SZABÓ G. 1994. A nagyrévi kultúra kialakulásának problémái a Duna mentén. *Zalai Múzeum* 5, 61–71.

TASIĆ N. 1984. Die Vinkovci - Kultur. In: TASIĆ N. (ed.), Kulturen der Frühbronzezeit des Karpatenbeckens und Nordbalkans, 15–33. Beograd.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

ARCHAEOBOTANICAL REMAINS AND ENVIRONMENT OF BELL BEAKER CSEPEL-GROUP

Ferenc Gyulai (Tápiószele, Hungary)

Introduction

In recent decades, interdisciplinary cooperation between archaeologists and archaeobotanists, has produced new results in the research area of Bell Beakers. To date, archaeobotanical material from Bell Beaker Csepel Group is known only from three sites: Csepel-Hollandi Street, Szigetszentmiklós and Albertfalva. The number of grains recovered by the water sieving of material from burnt settlement layers as well as from pits indicate that the inhabitants of this settlements preferred cultivating cereals (Table 1).

Around in the middle of 5th thousand BC a new climatic-historical period followed in the Carpathian Basin. This entire time interval is called the Subboreal Phase which, archaeological terms includes the Copper Age and the entire Bronze Age. The beginning of the Subboreal Phase was marked by a deterioration of the climate which lasted until the beginning/middle of 3rd thousand BC. Subsequently, the rainy climate became somewhat drier and warmer. Nomadic/ transhumant animal husbandry characteristic of the Copper Age, was replaced by a combination of animal keeping and a sedentary agriculturalist way of life by the Early Bronze Age. Agriculture, on the other hand, developed at the expense of the natural vegetation. In addition to human populations, the relationship between the natural and cultivated floras in the Carpathian Basin has also been influenced by climatic changes.

In the place of mobile animal husbandry characteristic of the Copper and Early Bronze Ages, a sedentary agricultural way of life became common which may be in connection with the cooler, more humid climate.

At the beginning of the Bronze Age the people of the Bell Beakers arrived to the Danube are near by Budapest from the west (KALICZ 1968). The Csepel Group of the Bell Beaker Culture inhabited constant settlements and pursued land cultivation. Probably in the Carpathian Basin migrated culture have been brought their early-cultivated plant species and cultivated here longer (GYULAI 2001).

Material and method

Archaeobotany (concerned with the evaluation of seed and fruit remains) concentrates chiefly on finds that were deposited as a result of human activity. Diasporae buried in the soil are also preserved differentially for a variety of reasons. In human habitation features (refuse pits, and -layers, cess-pools), mostly the evidence of ancient plough cultivation may be found. These include grain with the associated remains of weeds. Sometimes, however, seeds from the species of the natural flora are recovered as well, especially from wells and channels. Studying man-induced palaeo-biocoenoses is of great help in clarifying ancient lifeways as well as reconstructing ancient knowledge in land cultivation. The first weed associations dated to the Neolithic and Bronze Age, were relatively poor in species. Reconstructing ruderal plant associations is even more difficult.

The study of plant remains can help us understand local subsistence patterns, plant use, past environments and their utilization. Agriculture developed at the expense of the natural vegetation.

Studying man-induced palaeo-biocoenoses is of great help in clarifying ancient lifeways as well as reconstructing ancient knowledge in land cultivation. Recently, attempted reconstructions of the environment have gained special impetus. Thanatocoenology, a discipline concerned with the environment as reflected by excavated plant remains, is instrumental in recog-

Tabl. 1. Plantremains of the Bell Beakers from Hungary

Species	English name	Remnants	Ecogroup	Csepel-Hollandi út	Szigetszentmiklós	Albertfalva
Aegilops cf. cylindrica Host	Jointed goatgrass	naked grain	8.2./9.3.			1
Agropyron repens (L.) P. B.	Common couch-grass	naked grain	9.3.			3
Agrostemma githago L.	Korn-Rade	seed	9.3.			1
Agrostemma linicola L.	Korn-Rade	seed fragment	9.3.			1
Anagallis arvensis L.	Scarlet pimpernel	seed	9.3.		1	
Avena fatua L.	Spring wild-oat	naked grain	9.2/9.3	2		19
Blysmus cf. compressus (L.) Panzer	Flat-rush	achenes	3.1.	1		
Brassica campestris L.	Wild turnip	seed	9.3./10.2.		1	
Bromus arvensis L.	Field Brome	naked grain	9.3./10.2./8.2.	1		9
Bromus mollis L. (syn. B. hordeaceus)	Soft Brome	naked grain	9.3./10.2.			2
Bromus secalinus L.	Rye Brome	naked grain	9.3			10
Calamintha acinos (L.) Clairv.	Basil Thyme	achenes	8.3.			1
Calamintha clinopodium Spenner (syn. Satureje vulgaris Fritsch)	Wild Basil	achenes	8.3.			1
Centaurea jacea L.	Brown knapweed	achenes	8.2.			1
Cerealia	Cereals	grain fragment	9.1.	174	206	494
Chenopodium album agg.	Fan-hen	seed	9.2/9.3./10.2	3	6	5
Chenopodium polyspermum L.	Many-seeded Goosefoot	seed	9.3./7.1./3.			7
Cirsium cf. arvense (L.) Scop.	Creeping thistle	achenes	9.3	1		
Digitaria ischaemum (Schreb.) Mühlenb.	Smooth finger-grass	naked grain	9.3/9.2	1		3
Echinocloa crus-galli (L.) P. B.	Cockspur	naked grain	9.3.			1
Eleocharis palustris agg.	Common spike-rush	achenes	2.2			1
Fallopia convolvulus (L.) A. Löve	Black-bindweed	achenes	9.3.		1	3
Galium aparine L.	Cleavers	achenes	9.3./10.2.			1
Galium spurium L.	False Cleavers	achenes	9.3.			4
Glaucium corniculatum (L.) Rudolph	Red Horned-poppy	seed	9.3.			4
Heliotropium europaeum L.	Common heliotrope	achenes	9.3./9.2.			2
cf. Hordeum murinum L.	Wild barley-grass	hulled grain fragment	10.2./9.3.			1
Hordeum vulgare L.	Barley	hulled grain fragment	9.1.	26	8	29
Hordeum vulgare polystichum	Many-rowed barley	hulled grain fragment	9.1.	2		2
Hordeum vulgare ssp. hexastichum	Six-rowed barley	hulled grain	9,1	10	44	
Hordeum vulgare L. var. nudum	Naked barley	naked grain	9.1.	1		1
Hordeum vulgare subsp. distichum Zoh. var. nudum	Two-rowed nacked barley	hulled grain fragment	9.1.			5
Hordeum vulgare L.	Barley	earspindles fragment	9.1.			10
Hyoscyamus niger L.	Common henbane	seed	10.3.			1
cf. Lolium spec.	Ryegrass	naked grain	Diverz			1
Malva neglecta Wallr.	Dwarf Mallow	seed	10.1.			2
Malva silvestris L.	Cammon Mallow	seed	9.3./9.2./10.3		1	5
Medicago cf. minima (L.) Desr.	Bur Medick	seed	8.3.			1
Melampyrum arvense L.	Field Cowwheat	seed	9.3.			1
Melilotus albus Desr.	White melilot	seed	9.2./9.3./8.3.			1
Melilotus cf. officinalis (L.) Pall.	Ribbed melilot	seed	9.2./9.3./8.3.			1
Nepeta cataria L.	Cat-mint	achenes	10.3.			1
Neslea paniculata (L.) Desv.	Ball Mustard	seed	9.3.			1
Ornithogalum pyramidale L.	Spiked star of Betlehem	seed	9.3./10.3.			8
Panicum miliaceum L.	Millet	naked grain	9.1.		8	
Pisum sativum L. cf. arvense	Field pea	seed fragment	9.1.			1

Poa cf. annua L.	Annual meadow-grass	hulled grain fragment	9.3./10.2.			1
Poa spec.	Meadow-grass	naked grain fragment	Diverz			1
Poaceae	Grass	hulled grain fragment	Diverz			19
Polygonum aviculare agg.	Knotgrass	achenes	10.2.			1
Polygonum hydropiper L.	Water-pepper	achenes	2.3/ 9.2	1		
Polygonum mite Schrank	Tasteless water-pepper	achenes	2.3.			2
Reseda lutea L.	Wild Mignonette	seed	9.3./8.3./10.2.	1		1
Reseda luteola L.	Weld	seed	9.3./8.3.			1
Rumex obtusifolius L.	Broad-leaved dock	achenes	10.2.	1		
Scelaranthus annuus L.	Annual knawel	seed	9.3./10.2.			12
Schoenoplectus lacustris (L.) Palla	Common bulrush	achenes	2.1	44		
Schoenus nigricans L.	Bog-rush	achenes	3,1	1		
Sherardia arvensis L.	Field madder	achenes	9.3.			1
Silene cf. vulgaris (Moench) Garcke	Bladder campion	seed	8.2.		1	
Sinapis cf. arvensis L.	Charlock	seed fragment	9.3./9.2.			1
Solanum nigrum L.	Black nightshade	seed	9.2/10.2.			2
Stachys arvensis L.	Annual woundwort	achenes	9.3./9.2./8.1.	3		1
Stellaria media (L.) Vill.	Common chickweed	seed	9.2.	2		1
Teucrium chamaedrys L.	Germander	achenes	8.3.			3
Trifolium arvense L.	Hare's-foot clover	seed	9.3./10..2./7.1.		3	18
Trifolium spec.	Clover	seed	Diverz			4
Triticum cf. boeticum Boiss.	Wild Einkorn	naked grain	9.3.			1
Triticum monococcum L.	Einkorn	naked grain	9.1.			34
Triticum monococcum L.	Einkorn	earspindles (furca bicornis)	9.1.			559
Triticum turgidum L. subsp. dicoccum (Scrank) Thell.	Emmer	naked grain	9.1.	4	5	8
Triticum turgidum L. subsp. dicoccum (Scrank) Thell.	Emmer	earspindles (furca bicornis) fragm.	9.1.	21		24
Triticum monococcum/dicoccum	Einkorn/Emmer	earspindles (furca bicornis) fragm.	9.1.			13
Triticum aestivum ssp. vulgare (Vill.) MacKey	Cammon wheat	naked grain	9.1.			1
Triticum spec.	Wheat	naked grain fragment	9.1.			1
Triticum spec. villa	Wheat	earspindles (furca bicornis) fragm.	9,1	6		
Veronica hederifolia L.	Ivy-leaved Speedwell	seed	9.3./6.			1
Vicia faba L.	Horsebean	seed fragment	9.1.			1
Indet.		seed fragment		5		313
Foodremains		fragment		6	9	13
Sclerotia				1		
Nematode					5	
Summed (piece)				318	299	1684
Number of Samples				6	13	19
Volume of the Soilsamples (kg)				74	95	112
Numer of Species (Diversity)				16	10	55
Macroremainsconcentration				0,22	0,11	0,49
Archeologist				R. Kalicz-Schreiber, 1973.	A. Endrődi, 1999.	A. Endrődi, 2001.
Leg. et det.				F. Gyulai, 1999.	F. Gyulai, 2000.	F. Gyulai, 2001.

Legend: Ecogroup 2.1.=reeds, 2.2.=high sedge, 2.3.=watershore pioneers, 3.1.=moor plants, 8.2.=moderate meadow, 8.3.=arid meadow,
9.1.= cultivated plants, 9.2.=root-crop weeds, 9.3.=cereal-crop weeds, 10.1.=humid ruderal plants, 10.2.=moderate ruderal plants, 10.3.=arid ruderal plants

nizing ancient plant associations and thereby describing the environment of archaeological sites. These analyses are based on the natural demands of plants, since the species compositions of plant associations' change in time and space. This is an important development in the identification of fossil plant associations. For the purposes of environmental reconstruction ELLENBERG's (1974) plant sociological and ecological system was adopted to archeobotanical remains by JACOMET et al. (1989). Within the framework of this system, subfossil plant remains are arranged by a variety of traits for the purposes of further analysis.

In 1973 a settlement belonging to the Bell Beakers was excavated in Csepel-Hollandi Street by R. Kalicz-Schreiber (Budapest History Museum). For the archaeobotanical analysis 6 soil samples (74 kg) was taken from different objects mostly from pits. The well-preserved samples were flotated after 25 years and were found 318 seeds classified on 16 species (Table 1).

A. Endrődi (Budapest History Museum) conducted a rescue excavation in 1999 disturbed by the laying of a gas pipe in Szigetszentmiklós in the area of the northern end of Csepel Island. This investigation brought to light among others 24 graves and 16 refuse pits of the Bell Beaker culture. During the excavation thirteen soil samples was collected for the archaeobotanical investigation. Volume of the soil samples before flotation was 95 kg. The seeds in charcoal form also were found of the firing pits but missing in the graves. Food remains ware found only in graves. During the archaeobotanical investigation we have found 299 seeds classified on 10 plant species (Table 1).

In 2001 A. Endrődi (Budapest History Museum) excavated a village of the Bell Beakers in Albertfalva. During the excavation we have taken many soil samples from different objects (pits, fireplace, house surface etc.) for the interdisciplinary research. After the flotation relative much plant remains (seeds and fruits) was found in charcoal form. Mostly two (nos. 2 and 3) workshops are rich in seeds (Table 1). Altogether in 19 samples (112 kg) we have account 1684 seeds from 55 species. Apart from the seeds that were found, only very few archaeological finds were connected with agronomy, so their study was particularly important. The archaeobotanical investigation shows that the most important cereals of the here sattled population were einkorn (Triticum monococcum), emmer (Triticum dicoccum) as well as barley (Hordeum vulgare). Pea (Pisum sativum) was the favourite leguminous. Several seeds from weeds and natural vegetation were also found.

Results

The plant remains (seeds and grain) from Bell Beakers of Csepel Island (Csepel-Hollandi Street, Szigetszentmiklós, Albertfalva) belong to the category of so-called direct macrobotanical finds. Water sieving and flotation were carried out at the Biohistorical Farm in Szarvasgede in order to recover macrobotanical remains. Following sorting, identification was carried out using a stereo-binocular microscope. Both individual botanical finds and species were counted.

Most of the macrobotanical remains found in the soil samples representing the Bell Beakers were carbonised. This high number of both individuals and species point to human activity (Fig. 1 and 2).

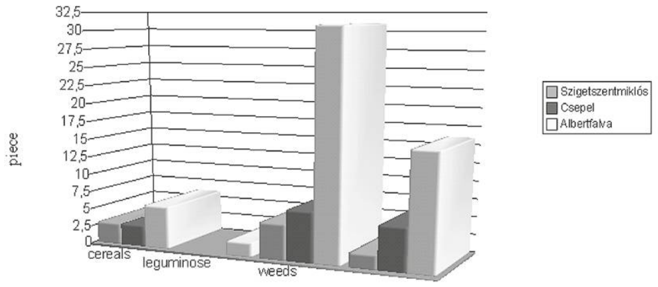


Fig. 1. The distribution of the plant species.

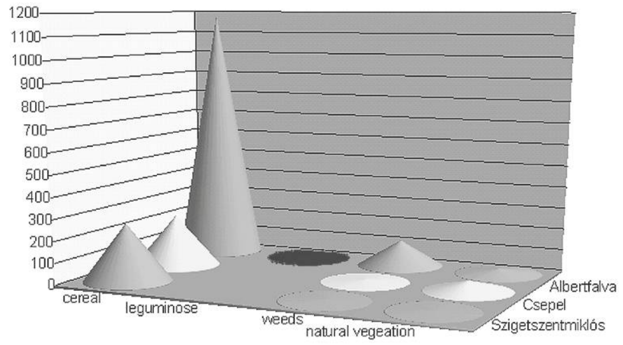


Fig. 2. The distribution of the plant remains.

In the oldest site of Bell Beaker culture (Csepel-Hollandi Street, Szigetszentmiklós) was produced mostly barley (Hordeum hexastichum) and millet (Panicum miliaceum) and only some hulled wheat like emmer (Triticum dicoccum) (Fig. 3). Forms of hulled cereals: barley and emmer characteristic of older periods (Csepel-Hollandi Street, Szigetszentmiklós). Millet was also account but only in Szigetszentmiklós. Barley and millet, the typical grain of mobile animal husbandry populations assumed a prominent role. The evidence of weeds in archaeobotanical plant associations is also indicative of this decline (Fig. 3).

In the younger period of Bell Beaker culture (Albertfalva) a significant portion of archaeobotanical finds originated from cereals (Fig. 3). This younger site is very rich in species (55 species). Eight cultigens

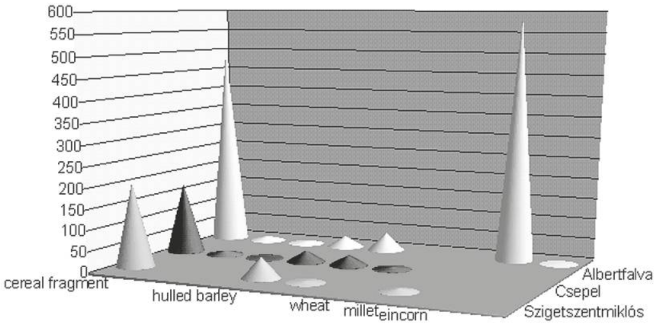


Fig. 3. The distribution of the cereal remains.

were identified in this young settlement. This prosperity could have based probably on the climate changing, which was favourable for the land using. Carbonised cereal grain was found in varying amounts in each of the studied features. Six row barley (Hordeum vulgare subsp. hexastichun), emmer, einkorn (Triticum monococcum) were here the main crops. Other cereal species like common wheat (Triticum aestivum) and naked barley (Hordeum vulgare var. nudum) only sporadic occur. Here is completely missing the millet. The presence of cereals suggests that this site was inhabited by a sedentary population. The einkorn and emmer ear spindles (furca bicornis) indicate that the cereals were cleaned, probably winnowed. It is almost certain that several vegetables: pea (Pisum sativum) and horse bean (Vicia faba) were also cultivated.

The number of the weed species in the older settlements (Csepel-Hollandi Street, Szigetszentmiklós) but in the younger settlement (Albertfalva) is very high. The number of weed remains is especially small in the old deposits, which may be explained with the expanding of the cereal cultivation. On the basis of the numbers of individuals, the number of cultivated species seems to have increased during the Early Bronze Ages. Almost four times more weeds were identified than cultigens. A major part of the weeds (27 species) in the younger settlement Albertfalva could have been winter grain cereal-crop weeds (Secalietea). Four weeds, on the other hand, are associated with the cultivation of spring cereals and gardening (root-crop) weeds (Polygeno-Chenopodietalia).

Ruderal plant species are found at each area exposed to antropogenetic effects (along drainage ditches, roads, on walls of banks, on wastes, in the neighbourhood of buildings) where the soil in rich in nitrogen, perhaps spontaneous dunged. Ruderalia are indicative of permanent human occupation. This trend becomes even more characteristic when the numbers of seeds are compared between the two periods.

At those sites where samples were taken also from the contemporary environment of archaeological features (Csepel-Hollandi Street, Szigetszentmiklós, Albertfalva) species composing the original flora of the region can be found in great quantity (Fig. 4, 5 and 6). All this suggests that the environment of the above-mentioned three settlements was diversified. The settled area by the younger settlement (Albertfalva) was bigger.

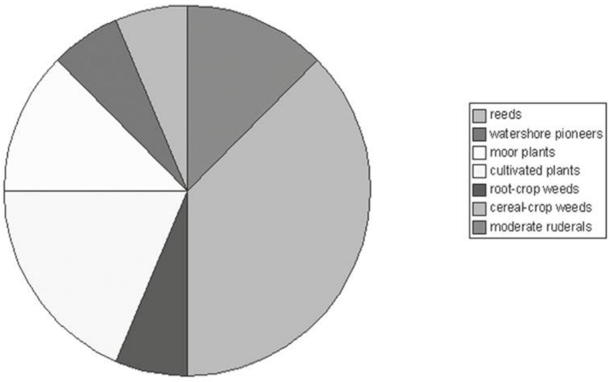


Fig. 4. Ecological distribution of the species Csepel-Hollandi street.

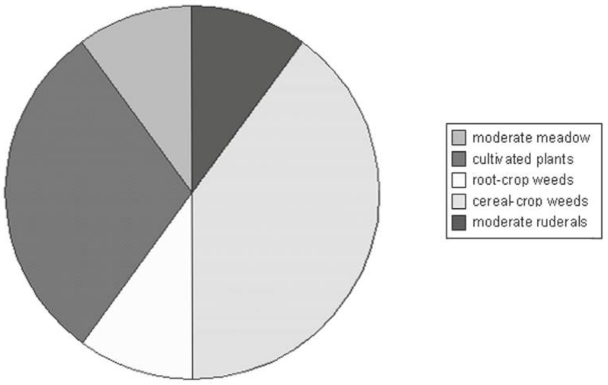


Fig. 5. Ecological distribution of the species Szigetszentmiklós.

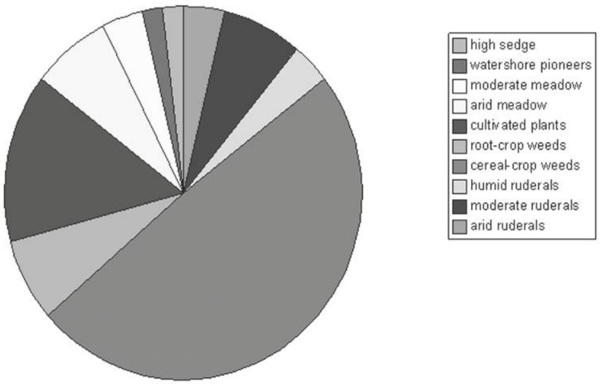


Fig. 6. Ecological distribution of the species Albertfalva.

In the case of the older samples (Csepel-Hollandi Street, Szigetszentmiklós) the spontaneous vegetation elements (wild plant species) were twice more as cultigens. But the younger site of Bell Beaker culture (Albertfalva) is very rich in cultivated and weed species, wild plant species occur only in trace. The thanatocoenosis (death assemblage) grouping applies that plants from of the lakeshore zone in case by Csepel-Hollandi Street are many but by Albertfalva only a small part. The here founded plant species shows the climate was dryer or the settled area was far away from the river. Ecological classifications based on the number of seeds clearly show that in Csepel-Hollandi út most of these seeds derive from reeds (Fig. 7, 8 and 9). Water plants and marshland elements in Albertfalva are represented by only small numbers of individuals. Meadow must have also existed in the proximity of the site. Animals may have been pastured in the nearby grassland areas which provided average quality forage.

Carbonised food remains have been also recovered in each place. The porosity of charred pieces shows the typical structure of gruel made from cereals. Nevertheless, results have contributed significant information on food consumption and subsistence culture of prehistoric people. Food remains are rarely encountered during the excavation of sites even cemeteries and settlements where food is clearly a major cultural component. Under the climatic conditions prevalent in the Carpathian Basin, food remains, when found, are usually preserved in a carbonised form, probably as a result of exposure to relatively mild heat in an anaerobic or at least oxygen poor environment. The identification of these finds contributes to reconstruction of ancient ways of life and gastronomic history.

Table 1. Ecological distribution of the remains Csepel-Hollandi street.

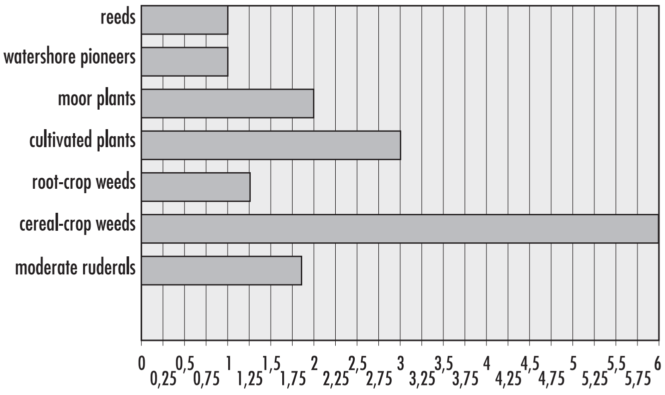


Table 2. Ecological distribution of the remains Szigetszentmiklós.

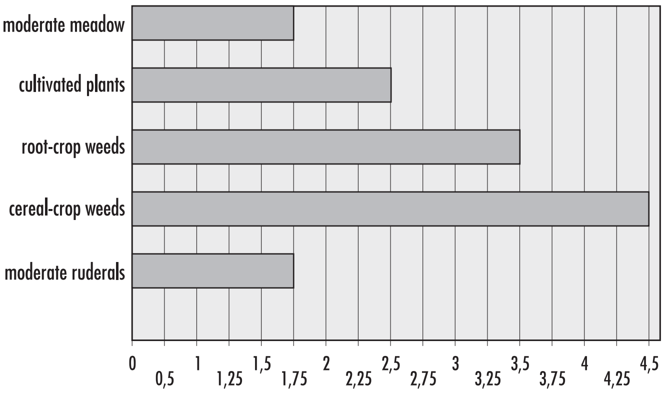
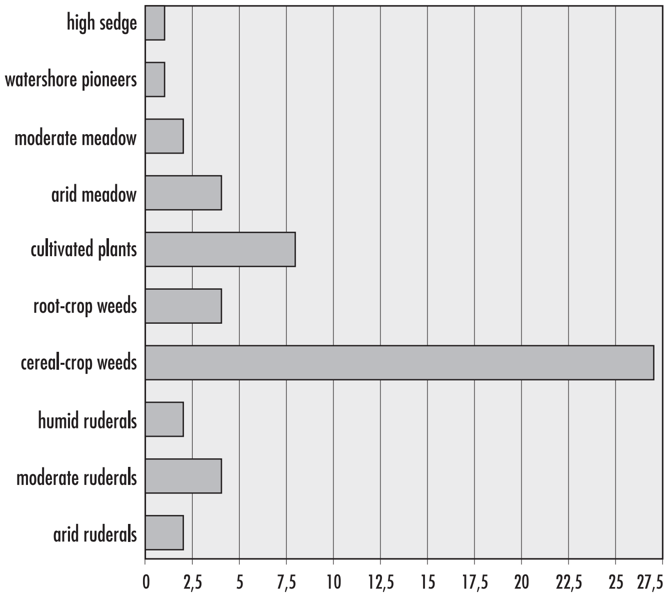


Table 3. Ecological distribution of the remains Albertfalva.



The analysis of macrobotanical remains shows that cultivated species dominated in the site's environment during the two periods studied here. By the Early Bronze Ages, new arrivals from the West region seem to have only slowly adopted crop cultivation practices while maintaining their animal keeping traditions. Environmental differences therefore are clearly reflected in the macrobotanical data.

References

Ellenberg H. 1974. Zeigerwerte der Gefässpflanzen Mitteleuropas. *Scripta Geobotanica* 9. Göttingen.

Gyulai F. 2001. *Archaeobotanika.* Jószöveg Műhely. Budapest.

Jacomet S. / Brombacher Ch. / Dick M. 1989. *Archäobotanik am Zürichsee.* Zürcher Denkmalpflege 7. Zürich.

Kalicz N. 1968. *Die Frühbronzezeit in Nordost-Ungarn.* Archaeologia Hungarica N.S. 45. Budapest.

Czebreszuk J. / Szmyt M. (eds.), The Northeast Frontier of Bell Beakers
BAR International Series 1155, Oxford 2003
ISBN 1 84171 525 5

The Northeast Frontier of Bell Beakers. First step to outline

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Of the rich subject matter covered in this volume concerning the presence of Bell Beakers (BB) in the northeastern zone, we shall discuss only few issues, namely: (1) exact delineation of the course of northeastern limit of BB presence, (2) significance of local cultural contexts in which BB appeared and developed, (3) general divisions inside the BB oecumene in the part of Europe under investigation, (4) models of dissemination of BB traits along the northeastern frontier and a closely related (5) need to distinguish a separate BB territorial unit on the North European Plain. Finally, we shall offer (6) general comments on the culture-making role of BB in the part of Europe under investigation.

1. There is no need to convince anybody today about great regional diversity of BB (cf. specifically Strahm (Hrsg.) 1995 and Nicolis (ed.) 2001). The diversity, which reflects different modes of the cultural presence of BB, has a bearing on the delineation of the spatial range of the whole phenomenon. This has always been difficult to do (cf. the classical approach by Harrison 1980 or in Strahm (Hrsg.) 1995), especially so in respect of the areas lying on the North European Plain. Owing to intensive research, the results of which are discussed in this volume, there is no doubt that the whole of the North European Plain as far as the Vistula line in the east should be included in the BB range. The diversification of regional BB agglomerations and a complex network of their ties to local groups make the question of the limits of the "Beaker" oecumene capable of being taken up only on a general level. This is in fact a search for a line dividing Europe into a "Beaker" and a "Beakerless" part. It is an attempt at such a division that we show in Fig. 1. On the northeastern frontier, as regions with BB must be counted: southern Scandinavia (see Vandkilde 2001; also Liversage in present volume), Schleswig-Holstein (Mertens in this volume), Mecklenburg (Mertens and Rassmann in this volume), Pomerania (Czebreszuk / Szmyt 2001; Makarowicz in this volume), Kujawy with the Chełmno Land (Czebreszuk 2001; Makarowicz in this volume), northern Great Poland (Czebreszuk 2001), Silesia (Makarowicz in this volume), right-bank Little Poland (Budziszewski / Haduch / Włodarczak in this volume), northwestern Slovakia (Bátora / Marková / Vladár in this volume), areas around Budapest (Endrödi in this volume) and that part of Austria that lies on the Danube (Kern in this volume). Apart from areas of compact occurrence, BB traits were adapted over larger regions as, for instance, on the southeastern coast of the Baltic (Czebreszuk / Kryvaltsevich, Loze and Sobieraj, in this volume) or in Slovakia (besides its northwestern fragment; Bátora / Marková / Vladár in this volume).

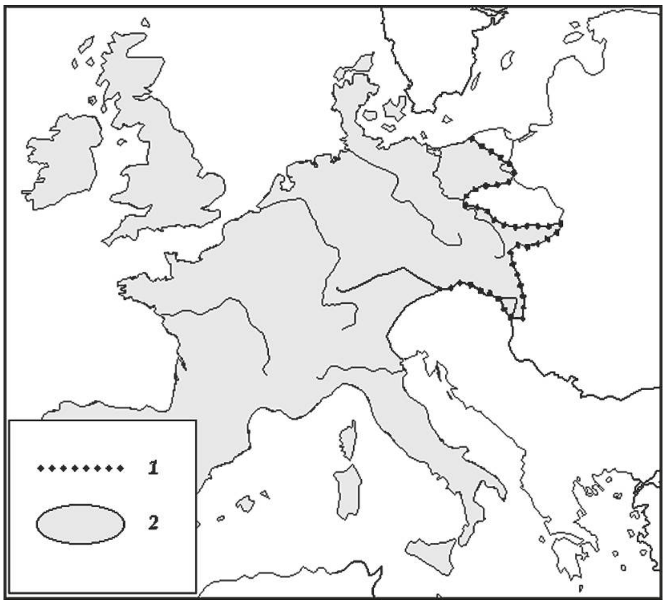

Fig. 1. The Northeast frontier of Bell Beakers (1) against their distribution in Europe (2).

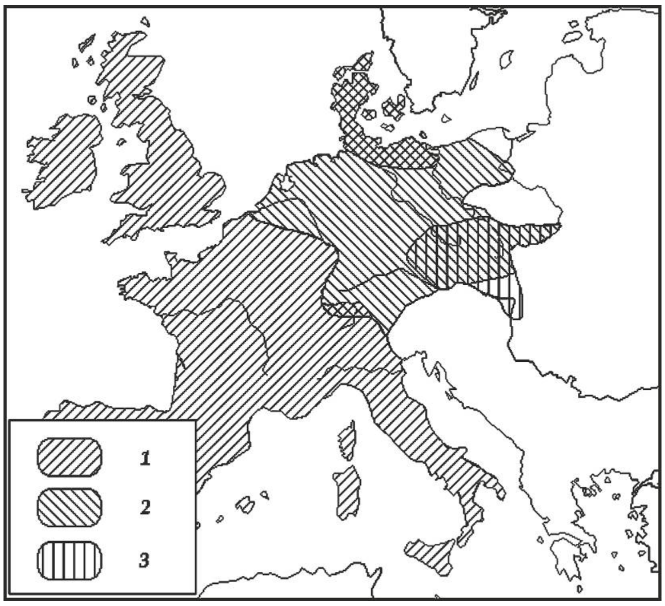

Fig. 2. Cultural substrata against the background of which Bell Beaker appeared: 1 - megalithic zone, 2 - “corded” zone, 3 - middle Danube zone.

2. One of the principal factors that make it difficult to assess the civilization significance of BB in the northeastern zone is the diversity of cultural contexts, or more precisely, multitude of local groups, with which BB co-occurred.

Generally speaking, in Europe one can distinguish three types of traditions (cultural substrata), against the background of which BB appeared. At the same time, there can be distinguished three zones characterized by the domination of a specific tradition. These are: megalithic, “corded” and middle Danube (Fig. 2). The first zone had the largest range, especially in the western, “Atlantic” part of Europe, while it reached the central part of our continent only to a limited degree in the form of the south Scandinavian enclave. The second (“corded”) covered a compact expanse of central Europe and “overlapped” with the first in Jutland. The middle Danube zone, with the narrowest spatial range, relied on the groups of the local Early Bronze Age. It is also worth noting that the types of cultural substrata named above do not exclude one another in terms of their spatial ranges; on the contrary, they co-occur with one another in many regions as, for instance, the megalithic and corded traditions in southern Scandinavia, Schleswig-Holstein, Mecklenburg and Pomerania (Czebreszuk 2001; Liversage in this volume) or the corded tradition with the middle Danube one in Bohemia (Kruťová and Turek / Dvořak / Peška in this volume), Moravia (Šebela / Škrdla in this volume), northwestern Slovakia (Bátora / Marková / Vladár in this volume) as well as in Silesia (Makarowicz in this volume) and Little Poland (Budziszewski / Haduch / Włodarczak in this volume).

A very important achievement of the papers collected in this volume is ascertaining the fact that in all the studied regions BB were contemporaneous with other groupings of the rank of archaeological groups or cultures frequently being a component of culturally more complex entities. The first such example comes from Małopolska, where BB developed concurrently with the Kraków-Sandomierz group of the Corded Ware culture and with the Mierzanowice culture (Budziszewski / Haduch / Włodarczak in this volume); another example can be found on the Saale River, where BB co-occurred with the Corded Ware and Unetice cultures (Müller 2001 and in this volume). Another clear-cut case is known from the North European Plain, where BB traits co-occurred with the Single Grave, Globular Amphora, and Unetice cultures or constituted a principal genetic element, as is the case in the Iwno and Trzciniec cultures (Czebreszuk 2001 and in this volume). A similarly complex situation prevailed in the vicinity of Budapest, where BB co-occurred with the traits of the Mako and Somogyvar groups (Endrödi in this volume).

3. The northeastern BB zone, therefore, was not monolithic. With respect to the traits of their cultural substrata, it seems that the greatest importance can be attached to the opposition of two traditions: the “megalithic” (dominant in the northern part of the studied area) and “middle-Danube” (in the southern part of the area in question) ones. The opposition (doubtless not only it, see remarks below) underlay the development of a basic dichotomy on the northeastern BB frontier. For a clear division of the zone under consideration into a northern and southern part emerges (Fig. 3:1) with the dividing line crossing the Polish Lowlands (Czebreszuk 2001, Fig. 35 and in this volume; Makarowicz in this volume). The dichotomy was deepened by significant differences in the circulation of BB traits in both parts.

4. To explain how BB spread throughout the northeastern zone is not easy. What only seems certain is the fact that no single interpretation model can be used for this purpose. In each case, one should look for an explanation on the regional scale. And so, for the North European Plain (north European BB province, see item 5), the most adequate seems to be the model of new cultural ideas (called a cultural package, in this case Beaker package) being disseminated among societies already settled there and representing different varieties of the Corded Ware culture (chiefly the Single Grave culture). Some time ago, a hypothesis was advanced that the dissemination was

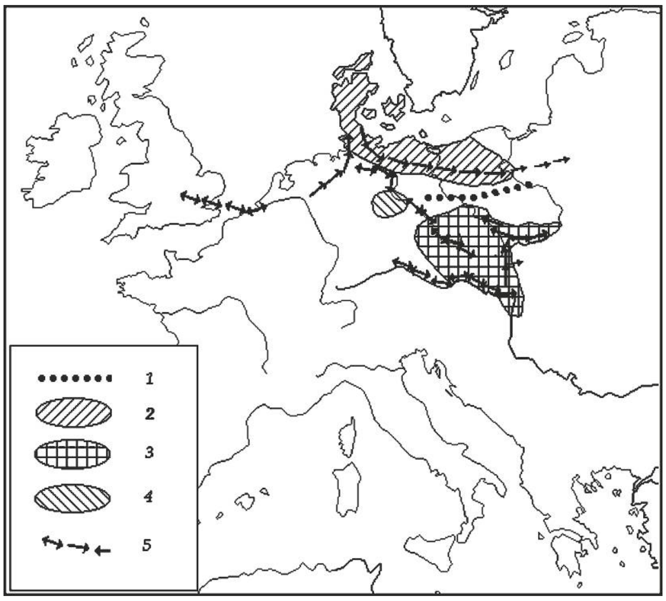

Fig. 3. The Northeast frontier of Bell Beakers: 1 – line dividing the northeast frontier of Bell Beakers into a northern and a southern part; 2 – the North European Bell Beakers province; 3 – the eastern Bell Beakers province (foll. Harrison 1980); 4 - Saale Bell Beakers agglomeration; 5 – main axis and directions of Bell Beakers traits translocation in the area under discussion.

related to the development of a new idea in the sphere of social organization having the form of secret societies (Czebreszuk 2001; 2002 and in this volume). Similarly, it was rather ideas than people that "migrated" in the case of areas around Budapest (Endrödi in this volume). An entirely different situation prevailed in Little Poland (Budziszewski / Haduch / Włodarczak in this volume) and, quite possibly, in Silesia too (Makarowicz in this volume). We deal there with a clear case of movement of a small group of migrants from the south. At the same time, however, at least in Little Poland, the presence of BB is not limited only to their "pure" form. A share of BB traits is clearly visible in the Kraków-Sandomierz group of the Corded Ware culture and in the early assemblages of the Mierzanowice culture (Budziszewski / Haduch / Włodarczak in this volume).

5. In the case of areas lying north of the dividing line we deal mostly with one-directional influx of BB traits from the British Isles and the Netherlands to southern Scandinavia (with the center lying in northern Jutland; see Vandkilde 2001; Liversage in this volume), northern Germany, Pomerania and Kujawy. These regions (from Jutland to Kujawy) have recently been grouped together to form a distinct unit within the Beaker oecumene (Fig. 3:2) called North European BB province (Czebreszuk 1996, 250; 2001, 194-196 and in this volume; Czebreszuk / Szmyt 2001). For the sake of reminding, the province is characterized by:

(a) The same substratum, namely, different varieties of the Single Grave culture with a clear share of the megalithic tradition,

(b) A single major source of BB traits, i.e. the Lower Rhineland agglomeration,

(c) A concurrent rhythm of stylistic changes of pottery (Czebreszuk 2001; Liversage in this volume) that began with (i) Maritime beakers and a style of ornamentation peculiar to them, later replaced by (ii) zonemetopic ornamentation with Myrhøj type beakers, stage (iii) with barbed wire ornaments and *Riesenbecher* beakers and finally with (iv) almost undecorated pottery closing the whole sequence (especially in Jutland),

(d) A clear presence of not only grave finds but also settlement ones, including settlements with rather more permanent structures, e.g. Myrhøj in Jutland (Jensen 1973; Liversage in this volume) or Smarglin in Kujawy (Czebreszuk / Przybył 2002),

(e) An important role played by flint daggers, the surface of which was excellently worked (Lomborg 1972; Czebreszuk 2001) and which were one of the main elements of the set of objects revealing social and cultural information (status, prestige, etc.).

The other part, lying south of the dividing line, is known in the literature on the subject as the eastern group of BB (Harrison 1980). The major channels of cultural contacts are very complicated and follow the river network (the upper and middle Danube, the Elbe) and natural mountain passes (Moravian Gate).

A special place on the BB map is occupied by the Saale region (Müller 2001 and in this volume; Hille in this volume). It brings together both northern and southern traits forming the principal node of exchange of information flowing not only along meridians but parallels as well.

6. The culture-making consequence of BB on their northeastern frontier is borne out by the civilization advance of these areas in the next time horizon, i.e. in the beginnings of the Bronze Age. It is surely no coincidence that in the same geographical limits as the north European province of BB (specifically its Jutland core) the Nordic culture later developed with its peculiar, highly developed bronze industry. In the south, doubtless in connection with the eastern BB group (Kruťová in this volume), the Unetice culture arose, which became one of the leaders of the European Bronze Age about 2000 BC.

The outline drawn in this volume may not be treated as a summing-up of all the topics raised in the discussion on the significance of BB on their northeastern frontier. Our aim was rather to point to the enormous research potential lying in this question and to draw attention to the key issues that will attract the interest of scholars in future investigations as well.

In the case of prehistory the concept of "frontier" may acquire an entirely opposite meaning to that which we attach to it within modern culture. For it is hard to tell, in the light of current knowledge, not only where but also if at all there was any "center" of BB. However, geographical limits of their occurrence, including the northeastern frontier, appear to us as areas of special cultural osmotic nature, areas that not only did not drag behind cultural transformations but set their pace instead.

References

Czebreszuk J. 2001. *Schyłek neolitu i poczatki epoki brązu w strefie południowo-zachodniobałtyckiej (III i początki II tys. przed Chr.). Alternatywny model kultury.* Poznań.

Czebreszuk J. 2002. From Typochronology to Calendar. A Case Study: Society between Jutland and Kujawy in the 3rd millennium BC. In: J. Müller (Hrsg.), *Vom Endneolithikum zur Frühbronzezeit: Muster sozialen Wandels? (Tagung Bamberg 14.-16. Juni 2001).* UPA 90, 235–244. Bonn.

Czebreszuk J. / Przybył A. 2002. *Osadnictwo społeczności neolitycznych i protobrązowych w Smarglinie, województwo kujawsko-pomorskie, stanowisko 22.* Źródła do studiów nad prahistorią Kujaw 15. Poznań.

Czebreszuk J./ Szmyt M. 2001. The Bell Beaker influences on the North European Plain. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, 459–470. Trento.

Harrison R.J. 1980. *The Beaker Folk. Copper Age Archaeology in Western Europe.* London.

Jensen J.A. 1973. Myrhøj, 3 hustomter med klokkebægerkeramik. *Kuml* 1972, 61–122.

Lomborg E. 1972. *Die Flintdolche Dänemarks. Studien über Chronologie und Kulturbeziehungen des südskandinavischen Spätneolithikums.* København.

Müller J. 2001. Zur Radiokarbondatierung des Jung- bis Endneolithikums und der Frühbronzezeit im Mittelelbe-Saale-Gebiet (4100-1500 v.Chr.). In: J. Müller, Radiokarbonchronologie – Keramiktechnologie – Osteologie – Anthropologie – Raumanalysen. Beiträge zum Neolithikum und zur Frühbronzezeit im Mittelelbe-Saale-Gebiet. *Bericht der Römisch-Germanischen Kommission* 80 (1999), 25–211.

Nicolis F. (ed.) 2001. *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe.* Trento.

Strahm Ch. (Hrsg.) 1995. *Das Glockenbecher-Phänomen. Ein Seminar.* Freiburger Archäologische Studien 2. Freiburg.

Vandkilde H. 2001. Beaker Representation in the Danish Late Neolithic. In: Nicolis F. (ed.), *Bell Beakers today. Pottery, people, culture, symbols in prehistoric Europe*, 333–360. Trento.